

LIBRA JOURNAL CLUB

3-10-AUG-2025

Our legal office confirmed that articles NOT OPEN ACCESS cannot be distributed to the members of the list. Thus, we will transmit only the titles of articles.

ABSTRACTS of almost all these articles are available from PubMed, and full papers can be obtained through your institutions' library.

OPEN ACCESS articles are available by accessing the articles from PubMed using just the PMID for the search (eg PMID: 35514131 without . at the end)

(copd OR "Pulmonary Disease, Chronic Obstructive"[Mesh])

1

COPD

-
-
-

. 2025 Dec;22(1):2542157.

doi: 10.1080/15412555.2025.2542157. Epub 2025 Aug 8.

[Reassessing Gabapentinoids in Chronic Obstructive Pulmonary Disease: Emerging Respiratory Safety Concerns](#)

[A Alcántara Montero¹](#)

Affiliations Expand

- PMID: 40779400
- DOI: [10.1080/15412555.2025.2542157](https://doi.org/10.1080/15412555.2025.2542157)

No abstract available

Full text links

[Proceed to details](#)

Cite

2

Multicenter Study

Stud Health Technol Inform

-
-
-

. 2025 Aug 7:329:992-996.

doi: 10.3233/SHTI250988.

[Development of Multivariable Prediction Models for 30-Day Risk of Readmission After COPD Hospital Admission: A Retrospective Cohort Study Using Electronic Medical Record Data from 7 Hospitals](#)

[Robert Wu](#)¹², [Ronald Chow](#)¹, [Olivia So](#)¹, [Lauren Lapointe-Shaw](#)¹², [Alex Mariakakis](#)³, [Andrea Gershon](#)¹⁴

Affiliations Expand

- PMID: 40776006
- DOI: [10.3233/SHTI250988](#)

Abstract

Background: Approximately 20% of patients who are discharged from hospital for an acute exacerbation of COPD (AECOPD) are readmitted within 30 days. Prediction scores are helpful to identify those who are at higher risk of readmission, such that they can be prioritized for readmission-reducing interventions.

Objectives: To develop and determine the accuracy and precision of a clinical prediction model using data available in electronic medical records to predict 30-day readmission in patients discharged after a hospitalization with an AECOPD.

Methods: A dataset was created using all admissions to General Internal Medicine from 2012 to 2018 at seven hospitals in Toronto, Canada. We fit and internally validated models with six algorithms.

Results: Of the 16,314 patients admitted with an exacerbation of COPD, 15.4% were readmitted at 30 days. Top-performing models included LASSO, logistic regression, linear discriminant analysis, and XGBoost with C-statistics of 0.688 ± 0.024 , 0.690 ± 0.026 , 0.687 ± 0.023 , and 0.686 ± 0.022 . The four top models had similarly high specificity (96%-98%) with poor sensitivity (14%-20%) at a decision threshold of 50%. At a more

aggressive decision threshold of 20%, specificity was less (69%-73%) with a modest improvement in sensitivity (55%-59%). The most important predictor of readmission risk was the number of hospitalizations in the previous year.

Conclusion: We generated clinical prediction models to predict all-cause 30-day readmissions after an acute exacerbation using data from 7 hospitals' electronic medical records. Further work should be done to improve performance, especially sensitivity.

Keywords: COPD; electronic medical record; machine learning; prediction; readmission.

Supplementary info

Publication types, MeSH termsExpand

Full text links

[Proceed to details](#)

Cite

3

Eur Respir J

-
-
-

. 2025 Aug 7:2500169.

doi: 10.1183/13993003.00169-2025. Online ahead of print.

[Pulmonary pressure increases during Acute Exacerbation in Chronic Obstructive Pulmonary Disease and clinical outcome](#)

[Ema Rastoder](#)^{1,2}, [Pradeesh Sivapalan](#)^{1,3,2}, [Caroline Hedsund](#)¹, [Peter Kamstrup](#)¹, [Tor Biering-Sørensen](#)^{4,5,6,7}, [Maria Dons](#)^{4,5}, [Trine Charlotte Bistrup Petersen](#)^{4,5}, [Filip Soeskov Davidovski](#)^{4,5}, [Kristoffer Grundtvig Skaarup](#)^{4,5}, [Morten Sengeløv](#)^{4,5}, [Emil Durukan](#)^{4,5}, [Ditte Vesterlev](#)^{4,5}, [Helena Zander Wodschow](#)⁸, [Lars Pedersen](#)⁹, [Josefin Eklöf](#)¹, [Anna Kubel Vogensen](#)¹, [Mia Moberg](#)¹⁰, [Julie Janner](#)¹⁰, [Louise Lindhardt Toennesen](#)¹⁰, [Hashmat S Z Bahrami](#)^{11,12}, [Ulrik Dixen](#)¹¹, [Jens Dahlgaard Hove](#)¹¹, [Magnus Thorsten Jensen](#)¹³, [Daniel Alexander Ackermann](#)¹, [Alexander Jordan](#)¹, [Valdemar Rømer](#)¹, [Søren Sperling](#)¹⁴, [Elisabeth Bendstrup](#)^{14,15}, [Casper Falster](#)^{16,17}, [Christian B Laursen](#)^{16,17}, [Jørn Carlsen](#)^{3,18}, [Jens-Ulrik Stæhr Jensen](#)^{19,3}

Affiliations Expand

- PMID: 40774812

- DOI: [10.1183/13993003.00169-2025](https://doi.org/10.1183/13993003.00169-2025)

Abstract

Background: Elevated pulmonary pressures can lead to right ventricular (RV) dysfunction, worsen respiratory status, and increase overall morbidity in chronic obstructive pulmonary disease (COPD) patients. Yet, little is known about the impact of right sided pressure changes during COPD exacerbations (AECOPD) on patient outcomes.

Aim: To determine whether pulmonary pressures are elevated during AECOPD compared to stable phase and to investigate the association between tricuspid regurgitation (TR) gradient during AECOPD and days alive and out of hospital (DAOH).

Methods: This multicenter, prospective study of pulmonary pressures changes in patients with AECOPD and stable phase. Inclusion criteria were diagnosis of COPD and admission with AECOPD. Transthoracic echocardiography (TTE), including TR gradient, tricuspid annular plane systolic excursion (TAPSE), RV diameter, and right atrial parameters, was performed during AECOPD and stable phase.

Results: Of 250 patients, 232 underwent TTE during AECOPD, and 107 completed stable-phase follow-up. Reasons for incomplete follow-up included death (46), withdrawal (23), poor TTE quality (21), and unmeasurable TR gradients (35). TR gradient increased significantly during AECOPD, with a mean difference of 6.0 mmHg (95% CI: 2.5-9.6), while TAPSE, RV diameter, and right atrial size showed no significant changes. Higher TR gradients during AECOPD correlated with lower DAOH.

Conclusion: TR gradient were significantly elevated during AECOPD, suggesting that transient right-sided pressure spikes are associated with COPD exacerbations. However, the direction of this association remains unclear, and further research is needed to determine whether right-sided pressure changes contribute to exacerbations or whether exacerbations themselves drive these pressure spikes.

Copyright ©The authors 2025. For reproduction rights and permissions contact permissions@ersnet.org.

Full text links

[Proceed to details](#)

Cite

4

BMJ Open

-

-
-

. 2025 Aug 6;15(8):e099447.

doi: [10.1136/bmjopen-2025-099447](https://doi.org/10.1136/bmjopen-2025-099447).

[BREATHEIN: Better understanding obstructive REspiratory Airway disease Treatment and HEalth: a nationwide INvestigative survey in Denmark-a study protocol](#)

[Kristina Kock Hansen](#)^{1,2,3}, [Lone Lund Pedersen](#)⁴, [Anders Løkke](#)^{4,3}, [Ole Hilberg](#)^{4,3}

Affiliations Expand

- PMID: [40774719](https://pubmed.ncbi.nlm.nih.gov/40774719/)
- DOI: [10.1136/bmjopen-2025-099447](https://doi.org/10.1136/bmjopen-2025-099447)

Free article

Abstract

Introduction: Understanding patient perspectives on asthma and chronic obstructive pulmonary disease (COPD) is limited, with no prior studies employing such a large-scale, proactive survey to systematically target individuals with a confirmed prescription for inhalation medication. This study aims to explore how patients with asthma or COPD manage their lives, including treatment experiences, symptoms and impacts on daily life.

Methods and analysis: A nationwide survey will be launched in January 2025, targeting adults (≥ 18 years) in Denmark diagnosed with asthma or COPD and prescribed or dispensed inhalation medication between 1 October 2023 and 30 September 2024. Data from the Danish Health Data Authority's Register of Medicinal Product Statistics will identify eligible individuals. The electronic survey will be distributed via e-Boks to approximately 450 000 individuals. The questionnaire integrates validated tools-COPD Assessment Test, Modified Medical Research Council scale, EuroQol 5-Dimension 5-Level and Asthma Control Test-alongside expert-developed questions on symptoms, diagnosis, disease control, treatment and patient experiences. Questionnaire development included 10 cognitive interviews with patients from the Outpatient Clinic at Vejle Hospital. Descriptive statistics will be used to analyse both continuous and categorical data, with sensitivity analyses conducted as well. Data management will be handled in Research Electronic Data Capture, and statistical analyses will be performed using Stata V.18.0.

Ethics and dissemination: The study is registered with the Danish Data Protection Agency (24/5229) and Open Patient Data Explorative Network (OP_2094) and follows the Declaration of Helsinki. Results will be published in peer-reviewed journals, presented at national and international conferences and shared through patient associations.

Keywords: Asthma; Chronic airways disease; Patient Participation; Pulmonary Disease, Chronic Obstructive; Surveys and Questionnaires.

© Author(s) (or their employer(s)) 2025. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ Group.

Conflict of interest statement

Competing interests: None declared.

Supplementary info

MeSH termsExpand

Full text links

[Proceed to details](#)

Cite

5

Chronic Obstr Pulm Dis

-
-
-

. 2025 Aug 6.

doi: 10.15326/jcopdf.2024.0599. Online ahead of print.

[Diagnosing Type 2 Inflammation in COPD: Comparison of Blood and Sputum Eosinophil Assessment in the University of California Los Angeles COPD Phenotyping Study](#)

[W Blake LeMaster](#)¹, [Sarah A Ingersoll](#)², [Hyewon Phee](#)², [Renee Wen](#)³, [Jing Bai](#)⁴, [John A Belperio](#)³, [Russell G Buhr](#)^{3,4,5}, [Jonathan E Phillips](#)², [Vyacheslav Palchevskiy](#)³, [Tiffany Bina](#)³, [Donald P Tashkin](#)³, [Christopher B Cooper](#)^{3,6}, [Igor Z Barjaktarevic](#)³

Affiliations Expand

- PMID: 40774276
- DOI: [10.15326/jcopdf.2024.0599](https://doi.org/10.15326/jcopdf.2024.0599)

Free article

Abstract

Background: COPD phenotyping is an approach for developing tailored therapies. The eosinophilic phenotype is associated with exacerbation risk and response to specific

treatments. This study evaluates the relationship between sputum and blood eosinophilia, hypothesizing that sputum eosinophil percentage (SpE%) better reflects disease severity and exacerbation risk than blood eosinophil counts (BEC).

Methods: A single-center, prospective observational cohort enrolled 107 participants aged 40-80 with clinically diagnosed COPD. Participants completed spirometry, a 6-minute walk test, and questionnaires, and blood and sputum samples were provided at baseline and 3 months. BEC and SpE% were measured via routine complete blood counts and flow cytometric analyses (FACS). Eosinophilic phenotype thresholds were defined as $BEC \geq 300$ cells/ μ L and $SpE\% \geq 2\%$, and associations with clinical characteristics and outcomes were investigated.

Results: Adequate sputum specimens were obtained less frequently than blood (60.7% vs 98%). SpE% showed poor repeatability (interclass coefficient 0.36) and poor correlation with FACS (Spearman's $\rho=0.008$, $p=0.58$). Conversely, BEC showed higher repeatability ($\rho=0.67$, $p<0.01$) and better correlation with FACS ($\rho=0.74$, $p<0.01$). More participants were classified as eosinophilic COPD by sputum (33.3%) than by blood (19.6%). BEC values were poorly correlated with SpE% ($\rho=0.13$, $P=0.39$), and sputum and blood-based diagnostic criteria showed poor agreement (64.5%, Cohen's κ 0.10). High SpE%, but not high BEC, was associated with lower FEV₁ % predicted.

Conclusions: In stable COPD patients, BEC and SpE% did not correlate well, and blood- and sputum-based diagnostic criteria identified different individuals. Defining eosinophilic COPD requires a better understanding of the biocompartment sampled, testing methods, and cut-off values used.

Keywords: COPD; biomarkers; blood; eosinophils; phenotypes; sputum.

JCOPDF © 2025.

Supplementary info

Grants and fundingExpand

Full text links

[Proceed to details](#)

Cite

6

Chronic Obstr Pulm Dis

-
-
-

. 2025 Aug 6.

doi: 10.15326/jcopdf.2025.0620. Online ahead of print.

[Navigating COPD and Bronchiectasis: A COPD Foundation 360Social Survey of Health Care Experiences and Perceptions](#)

[Radmila Choate](#)¹, [Timothy R Aksamit](#)², [John Torrence](#)³, [Phyliss A DiLorenzo](#)³, [Arturo Rodriguez](#)³, [Bruce Miller](#)³, [Jean Wright](#)³, [Dawn L DeMeo](#)⁴

Affiliations Expand

- PMID: 40774273
- DOI: [10.15326/jcopdf.2025.0620](#)

Free article

Abstract

Rationale: Chronic lung diseases, including COPD and bronchiectasis (BE), may differ by sex in symptom onset, diagnostic delays, and disease burden. This study examined healthcare experiences and symptom burden among individuals with self-reported COPD, BE, or non-tuberculous mycobacteria (NTM).

Methods: This cross-sectional study analyzed data from an online survey of U.S. and international participants with self-reported COPD, BE, or NTM, recruited via COPD Foundation (COPDF) social media. The questionnaire, developed with input from COPDF leadership, physician-researchers, and patient stakeholders, assessed healthcare experiences, disease burden, and symptoms. A subset of women answered menopause-related questions. Descriptive statistics were compared by sex and disease group: COPD (with/without BE or NTM) and BE (with/without NTM). T-tests assessed continuous variables; chi-square or Fisher's exact tests analyzed categorical variables.

Results: Among 632 respondents (mean age 70±9 years, 74% women), 68% reported COPD and 32% BE. Women with COPD were younger ($p=0.048$) and sought care sooner after symptom onset ($p<0.010$) than men. More women with COPD didn't have their diagnosis explained by a healthcare provider ($p=0.038$) and reported diagnosis-related anxiety, depression, or fear ($p=0.007$). Among participants with BE, men were more likely to receive a confirmed diagnosis sooner ($p=0.038$) and during hospitalization ($p=0.024$). Disease management burden, pulmonologist visit frequency, CAAT scores, numbers of comorbidities, and financial burden were similar across groups. Over 75% of women were postmenopausal, and one-third reported worsened pulmonary symptoms post-menopause.

Conclusions: Differences in diagnostic delays and symptom burden highlight the need for further research into healthcare disparities to improve pulmonary care and outcomes.

Keywords: COPD; bronchiectasis; self-perceived experiences; sex.

Full text links

[Proceed to details](#)

Cite

7

Ann Am Thorac Soc

-
-
-

. 2025 Aug 7.

doi: [10.1513/AnnalsATS.202502-185OC](https://doi.org/10.1513/AnnalsATS.202502-185OC). Online ahead of print.

[Risk Profile of Young Adults with Chronic Obstructive Pulmonary Disease](#)

[Andrea S Gershon](#)¹²³⁴, [Joseph Munn](#)⁵²⁶, [Rachel E McGihon](#)⁷, [Priscila Pequeno](#)², [Jin Luo](#)², [Alina Blazer](#)³, [Tetyana Kendzerska](#)⁸², [Shawn D Aaron](#)⁸, [Teresa To](#)⁷

Affiliations Expand

- PMID: 40772931
- DOI: [10.1513/AnnalsATS.202502-185OC](https://doi.org/10.1513/AnnalsATS.202502-185OC)

Abstract

Background: COPD risk profiles have been described in populations comprised of or including older adults, leaving factors associated with COPD in younger adults overlooked. We aimed to determine patient profiles of physician diagnosed COPD in younger adults.

Methods: A cohort study was conducted using population-based survey data linked to health administrative data from Ontario, Canada from 2007 to 2018. Younger adults 35 to 55 years newly diagnosed with COPD by physicians were matched to controls without physician diagnosed COPD. Multivariable conditional logistic regression models were used to identify statistically significant predictors of COPD. To contextualize results, the analysis was repeated in older adults.

Findings: There were 1094 younger adults with new physician diagnosed COPD. In adjusted analysis, previous influenza or pneumonia, higher level of comorbidity, a mental health condition and a history of asthma independently predicted COPD diagnosis in younger adults. With the exception of mental health conditions, these same variables predicted COPD diagnosis in older adults. However, male sex, lower income, a

history of respiratory disease other than asthma, and being overweight or underweight predicted COPD diagnosis in older but not in younger adults.

Interpretation: Having a mental health condition was associated with physician diagnosed COPD in younger adults while male sex, lower income, a history of respiratory disease other than asthma, and being overweight or underweight did not. This new knowledge can be used to dispel stereotypes about COPD. They also suggest that different screening criteria should be considered for younger adults.

Full text links

[Proceed to details](#)

Cite

8

J Health Popul Nutr

-
-
-

. 2025 Aug 6;44(1):281.

doi: 10.1186/s41043-025-01026-7.

[Associations between serum lipid profiles and the incidence of chronic obstructive pulmonary disease in the UK Biobank](#)

[Mengxia Li](#) ^{#1}, [Bingqing Xu](#) ^{#2}, [Hao Yu](#) ¹, [Yanan Wan](#) ¹, [Zheng Zhu](#) ¹, [Pengfei Luo](#) ¹, [Jian Su](#) ¹, [Jinyi Zhou](#) ^{#3}, [Xikang Fan](#) ^{#4}

Affiliations Expand

- PMID: 40770788
- PMCID: [PMC12330189](#)
- DOI: [10.1186/s41043-025-01026-7](#)

Abstract

Objective: To investigate the relationship between serum lipid levels and the risk of Chronic obstructive pulmonary disease (COPD) in the UK Biobank.

Methods: We performed this prospective study in 381,938 adults without COPD from UK Biobank. Serum high-density cholesterol (HDL-C), low-density cholesterol (LDL-C), total

cholesterol (TC), triglyceride (TG), apolipoprotein A (ApoA) and apolipoprotein B (ApoB) were measured and classified into quintiles. Restricted cubic spline (RCS) analysis was applied to visualize the dose-response relationship between lipids and COPD risk and Cox proportional hazard models to calculate hazard ratios (HRs) and 95% confidence intervals (CIs).

Results: We documented 10,443 incident COPD cases. Nonlinear relationships were found between HDL-C, LDL-C, TC, ApoA, ApoB and COPD risk with RCS analysis (P values for non-linearity < 0.05). Accordingly, multivariable-adjusted regression analysis indicated abnormal HDL-C and ApoA, and low LDL-C, TC and ApoB were associated with increased risk of COPD. Compared to intermediate quintile (Q3) group, both high or low HDL-C and ApoA were associated with risk of COPD. Corresponding HRs (95% CIs) were 1.15 (1.08-1.22), 1.16 (1.09-1.23) in Q1 group and 1.08 (1.01-1.16), 1.07 (1.00-1.14) in Q5 group. For LDL-C, TC and ApoB, there were more than 29% higher risk was observed in Q1 group with HRs (95% CIs) of 1.34 (1.27-1.42), 1.38 (1.30-1.46) and 1.29 (1.21-1.37), while HRs (95% CIs) were 0.88 (0.83-0.94), 0.92 (0.86-0.98) and 0.90 (0.84-0.95) in Q5 groups. We also observed the interactions between specific lipids and age at recruitment, sex and smoking status with stratified analysis.

Conclusions: Our study provides the first evidence demonstrating the associations between six major serum lipids and COPD risk, revealing multiple nonlinear relationships. There were U-shaped associations between serum HDL-C, ApoA and COPD risk, and L-shaped associations between LDL-C, TC, ApoB and COPD risk.

Keywords: Chronic obstructive pulmonary disease; Incidence; Prospective cohort study; Serum lipids; UK biobank.

© 2025. The Author(s).

Conflict of interest statement

Declarations. Ethics approval: This research was conducted according to the principles expressed in the Declaration of Helsinki. The UK Biobank study was approved by the North West Multi-Centre Research Ethics Committee (06/MRE08/65). Written informed consent was obtained from each participant. Participants gave informed consent to participate in the study before taking part. **Competing interests:** The authors declare no competing interests. **Financial support:** This study was supported by grants from Jiangsu Provincial Health Commission Medical Research Project (No.K2023072 and No.H2023022).

- [49 references](#)
- [2 figures](#)

Supplementary info

MeSH terms, Substances, Grants and fundingExpand

Full text links

[Proceed to details](#)

Cite

9

Meta-Analysis

Ann Med

-
-
-

. 2025 Dec;57(1):2541084.

doi: 10.1080/07853890.2025.2541084. Epub 2025 Aug 6.

[Low eosinophils and their dynamic as a predictor of death in patients with infections: a systematic review and meta-analysis of cohort studies](#)

[Larisa Pinte](#)¹²³, [Andra-Cristiana Dumitru](#)², [Andreea-Codruta Usurelu](#)⁴, [Cristian-Mihail Niculae](#)¹⁵, [Anamaria Draghici](#)¹, [Marius Alexandru Cotet](#)¹⁶, [Cristian Baicus](#)¹²

Affiliations Expand

- PMID: 40767138
- PMCID: [PMC12329832](#)
- DOI: [10.1080/07853890.2025.2541084](#)

Abstract

Background: Eosinophils prognostic significance in predicting mortality has become particularly notable during the COVID-19 pandemic. We aimed to evaluate the prognostic value of peripheral low eosinophil (eosinopenia) with focus on their dynamics (eosinophil recovery) in patients with infections.

Methods: We searched databases (MEDLINE, Embase, Scopus, Web of Science, and the Cochrane Library) and additional sources from inception to 1 December 2023. Cohort studies involving adult patients hospitalized with infections were evaluated using dual-reviewer methodology.

Results: Out of 15,066 screened papers, 151 studies met the inclusion criteria, with 107 focused on COVID-19, 14 on sepsis, 9 on *Clostridioides difficile*, 6 on acute COPD

exacerbations, and 17 on other infections. The majority of studies reported significantly lower admission eosinophil levels in non-survivors compared to survivors. Random-effects model meta-analysis showed mean eosinophil difference between deceased and survivors -15.31 (95% CI: -18.72 to -11.90) for COVID-19 and -44.6 (95% CI: -95.62 to 6.41) for sepsis ($I^2 > 90\%$). Mortality with eosinopenia showed low certainty of evidence for *C. difficile* (0 cells/mm³ cut-off: RR 2.35; 95% CI: 1.84-2.99) and very low for COVID-19 when considering different cut-offs (0 cells/mm³: RR 2.37; 95% CI: 1.86-3.01; 20 cells/mm³: RR 2.90; 95% CI: 1.59-5.28; 50 cells/mm³: RR 2.70; 95% CI: 1.33-5.49). Survivors generally showed an increase in eosinophil counts within the first 2-5 days of hospitalization, while the deceased had persistently low levels.

Conclusions: Eosinopenia, particularly the trajectory of eosinophil recovery, may serve as a cost-effective and accessible prognostic marker for mortality in patients with infections.

Keywords: COVID-19; Clostridioides difficile; dynamic; eosinopenia; eosinophil; infection; mortality; recovery; sepsis; systematic review.

Conflict of interest statement

The authors have no conflicts of interest to declare.

- [47 references](#)
- [5 figures](#)

Supplementary info

Publication types, MeSH termsExpand

Full text links

[Proceed to details](#)

Cite

10

Lung Cancer

-
-
-

. 2025 Aug 4:207:108700.

doi: 10.1016/j.lungcan.2025.108700. Online ahead of print.

[Immune checkpoint inhibitors for advanced non-small cell lung cancer with preexisting COPD and CT-defined emphysema: A systematic review and meta-analysis](#)

[Yixiao Zhang](#)¹, [Jin Zhao](#)², [Zhuo Ma](#)³, [Jiawen Yi](#)⁴, [Yuan Yuan](#)⁵, [Lu Lang](#)⁶, [Chen Zhang](#)⁷, [Min Zhu](#)⁸, [Yuhui Zhang](#)⁹

Affiliations Expand

- PMID: 40763414
- DOI: [10.1016/j.lungcan.2025.108700](https://doi.org/10.1016/j.lungcan.2025.108700)

Abstract

Background: Preexisting chronic obstructive pulmonary disease(COPD) and Computed Tomography(CT)-defined emphysema are associated with worse prognosis in patients with non-small cell lung cancer(NSCLC) receiving chemotherapy, but the impact of these comorbidities on patients undergoing immune checkpoint inhibitors(ICIs) remains largely unclear.

Methods: Studies on the safety and efficacy outcomes among advanced NSCLC with preexisting COPD and CT-defined emphysema receiving ICIs from various databases up to August 2024 were collected. The number of events, as well as pooled effect size [odds ratio(OR) and hazard ratio (HR)] and 95% confidence intervals (CIs) were obtained.

Results: A total of 21 studies (7 on efficacy, 11 on safety, and 3 on both) were included. Meta-analysis revealed the pooled overall response rate (ORR) and pooled disease control rate (DCR) were 38% and 62%, respectively. Compared to patients without preexisting COPD and CT-defined emphysema, the pooled OR for ORR and DCR was 1.88 (95% CI, 1.45-2.44) and 2.23 (95% CI, 1.67-2.98), without heterogeneity. COPD and CT-defined emphysema were also associated with better progression-free survival (HR, 0.63 [95% CI, 0.50-0.80]) and overall survival (HR, 0.59 [95% CI, 0.41-0.88]). The pooled incidences of any grade and grade 3 or higher checkpoint inhibitor-related pneumonitis (CIP) were 20% and 6% in patients with preexisting COPD and CT-defined emphysema, which was significantly higher than that in those without these comorbidities (OR, 1.97 [95% CI, 1.41-2.76]; OR, 2.52 [95% CI, 1.72-3.70]). Moreover, most cases of CIP (84.0%) improved with ICIs discontinuation and/or the administration of corticosteroids.

Conclusion: Preexisting COPD and CT-defined emphysema were associated with favorable clinical efficacy and increased risk of CIP in the immunotherapy era. Most cases of CIP are treatable and manageable.

Keywords: CT-defined emphysema; Chronic obstructive pulmonary disease; Immune checkpoint inhibitors; Non-small cell lung cancer.

Copyright © 2025. Published by Elsevier B.V.

Conflict of interest statement

Declaration of competing interest The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Full text links

[Proceed to details](#)

Cite

11

Eur Radiol

-
-
-

. 2025 Aug 5.

doi: [10.1007/s00330-025-11886-6](https://doi.org/10.1007/s00330-025-11886-6). Online ahead of print.

[Beyond the heart: prevalence and implications of extra-coronary findings in coronary CT angiography: a retrospective study](#)

[David A Gloor](#)¹, [Inga Todorski](#)², [Alan Peters](#)¹, [Benedikt Wagner](#)³, [Tobias Gassenmaier](#)⁴, [Justus Roos](#)⁴, [Andreas Christe](#)¹, [Lukas Ebner](#)¹⁴⁵, [Adrian T Huber](#)⁶⁷⁸

Affiliations Expand

- PMID: [40762727](https://pubmed.ncbi.nlm.nih.gov/40762727/)
- DOI: [10.1007/s00330-025-11886-6](https://doi.org/10.1007/s00330-025-11886-6)

Abstract

Objectives: To evaluate the prevalence and clinical implications of extra-coronary findings in a large cohort of patients undergoing coronary computed tomography angiography (CCTA).

Materials and methods: This retrospective study analyzed data from 3295 consecutive CCTA examinations at a single tertiary center. Radiology reports were reviewed for potentially significant extra-coronary findings. Three-year follow-up evaluation was performed via hospital records. Prevalences of confirmed significant findings were determined and extrapolated to patients lost to follow-up.

Results: Extra-coronary findings were reported in 92.7% (3053/3295) of patients. Potentially significant non-cardiovascular findings were found in 25.3% (833/3295), including potentially malignant findings in 8.5% (281/3295) and significant non-malignant findings in 19.3% (637/3295). Among patients with potentially malignant findings, 40.2% (113/281) underwent follow-up, with confirmed malignancy in 28.3% (32/113). Extrapolation suggests a malignancy prevalence of up to 2.4% (95% CI: 1.8-3.2%) within

the CCTA field of view, with a minimum of 1.0% if all patients lost to follow-up were assumed to have no malignancy. The most frequent significant non-malignant finding was pulmonary emphysema (10.7%; 352/3295), with extrapolated prevalence rates of 4.2% (95% CI: 2.6-5.9% for COPD and 1.8% (95% CI: 0.8-3.4%) for asthma or obstructive sleep apnea. Liver steatosis was present in 4.5% (147/3295), with an estimated prevalence of 3.1% (95% CI: 1.6-4.2%) for metabolic dysfunction-associated steatotic liver disease and 1.3% (95% CI: 0.3-2.9%) for alcohol-related liver disease.

Conclusion: Extra-coronary findings are common in CCTA and carry important clinical implications. Careful management is necessary, and additional screening protocols may benefit high-risk patients.

Key points: Question How frequently do extra-coronary findings occur in coronary CT angiography, and what is their clinical impact in patients undergoing cardiac evaluation? Findings Clinically significant extra-coronary non-cardiovascular findings were identified in 25.3% of patients, including unsuspected malignancies and relevant pulmonary and hepatic comorbidities. Clinical relevance Extra-coronary findings on coronary CT angiography are common and often clinically relevant, warranting structured assessment to support timely diagnosis and multidisciplinary patient care.

Keywords: Coronary vessels; Incidental findings; Neoplasms; Pulmonary disease; Tomography (X-ray computed).

© 2025. The Author(s).

Conflict of interest statement

Compliance with ethical standards. Guarantor: The scientific guarantor of this publication is Prof. Adrian T. Huber, MD, PhD. **Conflict of interest:** The authors of this manuscript declare no relationships with any companies, whose products or services may be related to the subject matter of the article. **Statistics and biometry:** No complex statistical methods were necessary for this paper. **Informed consent:** Written informed consent was waived by the Institutional Review Board. **Ethical approval:** Institutional Review Board approval was obtained. **Study subjects or cohorts overlap:** No study subjects or cohorts have been previously reported. **Methodology:** Retrospective Observational Performed at one institution

- [46 references](#)

Supplementary info

Grants and fundingExpand

Full text links

[Proceed to details](#)

Cite

-
-
-

. 2025 Aug 4;11(4):01078-2024.

doi: 10.1183/23120541.01078-2024. eCollection 2025 Jul.

[Peripheral airway function and disease burden in COPD](#)

[Martin Färdig](#)^{1,2}, [Karin Lingman](#)^{1,2}, [Karin Lisspers](#)³, [Björn Ställberg](#)³, [Christer Janson](#)⁴, [Marieann Högman](#)⁴, [Andrei Malinovski](#)¹

Affiliations Expand

- PMID: 40761654
- PMCID: [PMC12320105](#)
- DOI: [10.1183/23120541.01078-2024](#)

Abstract

Background: While oscillometry appears advantageous over spirometry in detecting peripheral airway dysfunction, a feature of COPD, further research on its role in disease monitoring is needed. The objectives of the present study were to analyse the associations between oscillometry by impulse oscillometry (IOS) and forced oscillation technique (FOT) and airway obstruction, health status, dyspnoea and future exacerbations in COPD.

Methods: Oscillometry and disease burden were assessed in 150 adults with COPD within the Tools Identifying Exacerbations study. At 5 Hz, abnormal resistance (R_{rs5}) and reactance (X_{rs5}) were defined as z-scores >1.645 and <-1.645 sd, respectively, whereas a mean difference in reactance between inspiration and expiration >2.80 cmH₂O·L⁻¹·s⁻¹ represented abnormal ΔX_{rs5} . Forced expiratory volume in 1 s (FEV₁), COPD Assessment Test (CAT) and modified Medical Research Council (mMRC) scores were obtained. Medical records were reviewed for future exacerbations (≥ 1) between baseline and 1 and 3 years, respectively.

Results: Abnormal oscillometry correlated with disease burden, with the highest risk observed for severe airway obstruction (FEV₁ $<50\%$ pred): odds ratios with 95% confidence intervals ranging from 4.80 (1.93-12.0) to 18.0 (7.13-45.3) for R_{rs5} , X_{rs5} and ΔX_{rs5} , followed by moderate to severe dyspnoea (mMRC ≥ 2) for ΔX_{rs5} , COPD health status (CAT ≥ 10) for R_{rs5} and ΔX_{rs5} and future exacerbations (1 and 3 years)

for R_{rs5} and X_{rs5} , respectively, with odds ratios (95% CI) ranging from 2.77 (1.27-6.05) to 3.98 (1.38-11.5).

Conclusions: Abnormal oscillometry may be relevant in the evaluation of COPD patients, including the prediction of future exacerbation risk.

Copyright ©The authors 2025.

Conflict of interest statement

Conflict of interest: The authors have nothing to disclose.

- [36 references](#)
- [2 figures](#)

Full text links

[Proceed to details](#)

Cite

13

Expert Rev Vaccines

-
-
-

. 2025 Dec;24(1):769-781.

doi: 10.1080/14760584.2025.2539884. Epub 2025 Aug 5.

[Vaccination in adults at-increased risk of herpes zoster in Canada: insights from a multidisciplinary panel consensus](#)

[Wayne Ghesquière¹](#), [Dominique Tessier²](#), [Vivien Brown³](#), [Lyn Guenther⁴](#), [Derek Haaland⁵](#), [John Igoe⁶](#), [Kelly S MacDonald⁷](#), [Carolyn Whiskin⁸](#)

Affiliations Expand

- PMID: 40717622
- DOI: [10.1080/14760584.2025.2539884](#)

Free article

Abstract

Background: Risk of herpes zoster (HZ) increases with age (notably at ≥ 50 years), with greater risk also apparent in immunocompromised populations. The use of the recombinant zoster vaccine (RZV) in adults aged ≥ 50 years is established in Canada. However, while licensed RZV use was expanded in 2021 to include individuals ≥ 18 years of age who are or will be at increased risk of HZ due to immunodeficiency or immunosuppression caused by known disease or therapy, there remains some uncertainty for clinicians regarding which patients should be offered vaccination.

Research design and methods: To assist decision-making, a Canadian multidisciplinary panel was convened to develop guidance on the use of RZV in at-risk adults aged ≥ 18 years through a consensus approach, defined as $\geq 75\%$ of the experts rating their agreement.

Results: The panel concluded that RZV should be offered to all at-risk individuals aged ≥ 18 years who are or will be at increased risk of HZ due to disease or therapy, in line with the licensed indication. This includes those with chronic medical conditions at greater risk of HZ (e.g. COPD, diabetes). Decisions should be individualized based upon patient assessment and shared clinical decision-making. Where possible, the two-dose vaccine series should be given at the earliest opportunity.

Conclusions: Findings from this expert consensus provide guidance on the use of RZV in individuals ≥ 18 years at increased risk of HZ. Our views complement updated national recommendations for immunocompromised patients issued in May 2025.

Keywords: Herpes zoster; consensus; immunization; immunocompromised; increased risk; recombinant zoster vaccine.

Supplementary info

MeSH terms, SubstancesExpand

Full text links

[Proceed to details](#)

Cite

14

JCI Insight

-
-
-

. 2025 Jun 24;10(15):e193640.

doi: 10.1172/jci.insight.193640. eCollection 2025 Aug 8.

[HSP70 is a chaperone for IL-33 activity in chronic airway disease](#)

[Omar A Osorio](#)¹, [Heather E Raphael](#)¹, [Colin E Kluender](#)¹, [Ghandi F Hassan](#)¹, [Lucy S Cohen](#)¹, [Deborah F Steinberg](#)¹, [Ella Katz-Kiriakos](#)¹, [Morgan D Payne](#)¹, [Ethan M Luo](#)¹, [Jamie L Hicks](#)¹, [Derek E Byers](#)¹, [Jennifer Alexander-Brett](#)^{1,2}

Affiliations Expand

- PMID: 40553562
- PMCID: [PMC12333954](#)
- DOI: [10.1172/jci.insight.193640](#)

Abstract

IL-33 is a key driver of type 2 inflammation and implicated in pathology of chronic obstructive pulmonary disease (COPD) and asthma. However, the mechanism for IL-33 secretion and regulation in the context of chronic airway disease is poorly understood. We previously reported an airway disease-associated isoform IL-33 Δ 34 that escapes nuclear sequestration and is tonically secreted from epithelial cells. Here, we describe how this IL-33 Δ 34 isoform interacts with HSP70 within cells and is targeted to secretory organelles through coordinated binding to phosphatidylserine (PS) and delivered to compartments for unconventional protein secretion (CUPS). Once secreted, extracellular HSP70 (eHSP70) in complex with IL-33 Δ 34 stabilizes the cytokine by inhibiting oxidation and degradation, which results in enhanced IL-33 Δ 34-receptor binding and activity. We further find evidence that IL-33 along with mediators of the proteostasis network HSP70, HSP90, and the Chaperonin Containing TCP1 (CCT) complex are dysregulated in human chronic airway disease. This phenomenon is reflected in the differential extracellular vesicle (EV) proteome in bronchial wash from COPD and asthma samples, which could mark disease activity and potentiate IL-33 function. This study confirms proteostasis intermediates, chiefly HSP70, as chaperones for noncanonical IL-33 secretion and activity that may be amenable for therapeutic targeting in the chronic airway diseases COPD and asthma.

Keywords: COPD; Chaperones; Cytokines; Immunology; Pulmonology.

Conflict of interest statement

Conflict of interest: JAB is a site principal investigator for the Astra Zeneca TILIA clinical trial.

- [83 references](#)
- [6 figures](#)

"Multimorbidity"[Mesh Terms] OR Multimorbidity[Text Word]

1

Qual Life Res

-
-
-

. 2025 Aug 9.

doi: 10.1007/s11136-025-04044-4. Online ahead of print.

[Are physical activity, sleep, and joint pain associated with physical function and quality of life in individuals with multimorbidity? A cross-sectional analysis of the MOBILIZE trial](#)

[Travis Haber](#)¹, [Alessio Bricca](#)^{2,3}, [Michelle Hall](#)⁴, [Jan Christian Brønd](#)⁵, [Lau Thygesen](#)⁶, [Søren T Skou](#)^{2,3}

Affiliations Expand

- PMID: 40782142
- DOI: [10.1007/s11136-025-04044-4](https://doi.org/10.1007/s11136-025-04044-4)

No abstract available

Keywords: Comorbidities; Exercise; Osteoarthritis; Physical function; Quality of life; Sleep.

Conflict of interest statement

Declarations. Competing interests: STS is co-founder of Good Life with Osteoarthritis in Denmark (GLA: D[®]), a not-for profit initiative hosted at University of Southern Denmark aiming at implementing clinical guidelines for persons with osteoarthritis in clinical practice. The authors declare that there is no other conflict of interest.

- [74 references](#)

Full text links

[Proceed to details](#)

Cite

2

Sports Med Open

-

-
-

. 2025 Aug 7;11(1):93.

doi: [10.1186/s40798-025-00897-8](https://doi.org/10.1186/s40798-025-00897-8).

[Health among Retired Great Britain's Olympic Athletes: A cross-sectional Study of Disease and Multimorbidity](#)

[Dale J Cooper](#)¹, [Julius Sim](#)²

Affiliations Expand

- PMID: 40772983
- PMCID: [PMC12332171](#)
- DOI: [10.1186/s40798-025-00897-8](https://doi.org/10.1186/s40798-025-00897-8)

Abstract

Background: Currently, there is a paucity of long-term health data for retired athletes. This study describes the prevalence of common morbidities and multimorbidity among retired Great Britain's (GB) Olympic athletes, compared to a general population comparator group.

Methods: A cross-sectional study of retired athletes was undertaken. The English Longitudinal Study of Ageing (ELSA) served as the reference population. Age- and sex-standardized morbidity ratios (SMRs) and odd ratios (ORs) determined where morbidity and multimorbidity prevalence amongst retired athletes exceeded or were inferior to those of the reference population.

Results: Retired athletes (n = 493) were less likely (SMR < 1) than controls (n = 8024) to report diabetes (0.43, 99% CI 0.22, 0.74), stroke (0.39, 99% CI 0.12, 0.90), obesity (0.35, 99% CI 0.23, 0.50), asthma (0.29, 99% CI 0.12, 0.59), lung disease (0.29, 99% CI 0.06, 0.81), angina (0.18, 99% CI 0.05, 0.46), and eye disorders (0.06, 99% CI 0.01, 0.18). In addition, abnormal heart rhythm (0.45, 99% CI 0.40, 0.54) and osteoporosis (0.46, 99% CI 0.42, 0.51) were lower in female athletes. Retired athletes were more likely (SMR > 1) than controls to report melanoma or other skin cancer (5.64, 99% CI 2.80, 10.06) and osteoarthritis (1.44, 99% CI 1.18, 1.75). There were no differences detected in cancers of the breast, prostate, colon, bowel or bladder. Multimorbidity was less prevalent among retired athletes (OR 0.50, 99% CI 0.38, 0.67).

Conclusions: Retired athletes had superior cardiovascular health and a lower risk of multimorbidity, but were more at risk of melanoma or other skin cancer and osteoarthritis.

Keywords: Chronic Diseases; Melanoma; Multimorbidity; Olympic Athletes; Prevalence.

© 2025. The Author(s).

Conflict of interest statement

Declarations. Ethics Approval and Consent to Participate: The Faculty of Medicine and Health Sciences Research Ethics Committee, University of Nottingham (Ethics Reference No: K13022014). It was agreed in the ethics approval, and with the British Olympic Association and the British Olympic Associations Athletes' Commission, that implied consent would be used to avoid the use of personal signatures that could identify the GB Olympian. The letter of invitation and the participant information sheet made it explicit that by completing and returning the Olympian questionnaire, GB Olympians gave implied consent. GB Olympians were informed that if they completed and returned the Olympian questionnaire, they were consenting to have their details stored for future analysis. GB Olympians were informed that they were giving authorization for inclusion of their data in public release data sets, such as journal articles and press releases. The ELSA data are publicly available. Ethics approval for ELSA was previously provided by the NHS Research Ethics Committees under the National Research and Ethics Service (NRES). Anonymized ELSA data for the present study were provided by the UK Data Service. **Consent for Publication:** It was made explicitly clear to GB participants that by completing and returning a questionnaire, they gave implied consent for publication from the dataset. Anonymized ELSA data are publicly available from the UK Data Service. **Competing Interests:** The authors have no relevant financial or non-financial interests to disclose. The authors have no conflicts of interest to declare that are relevant to the content of this article. All authors certify that they have no affiliations with or involvement in any organization or entity with any financial interest or non-financial interest in the subject matter or materials discussed in this manuscript. The authors have no financial or proprietary interests in any material discussed in this article.

- [38 references](#)
- [3 figures](#)

Supplementary info

Grants and fundingExpand

Full text links

[Proceed to details](#)

Cite

3

BMC Health Serv Res

-
-
-

. 2025 Aug 5;25(1):1025.

doi: [10.1186/s12913-025-13243-1](https://doi.org/10.1186/s12913-025-13243-1).

[Clinical and economic outcomes of multidisciplinary team members in primary care: a scoping review](#)

[Elisa Jokelin](#)¹, [Soila Karreinen](#)², [Erja Mustonen](#)³, [Paulus Torkki](#)⁴

Affiliations Expand

- PMID: [40764920](#)
- PMCID: [PMC12323019](#)
- DOI: [10.1186/s12913-025-13243-1](https://doi.org/10.1186/s12913-025-13243-1)

Abstract

Background: Multidisciplinary teams are gaining popularity as an operational model in primary care. Evidence about their clinical results and costs is unclear. Likewise, it remains unknown which professionals should be present in the teams. We aimed to investigate which disciplines have been added to primary care teams, what are the target populations, and what is known about their impact on clinical results and costs.

Methods: This scoping review is based on literature searches in OVID Medline, Scopus and CINAHL. The search terms “primary care”, “multidisciplinary team”, “intervention” and “outcome” and their synonyms were used to identify the potential body of literature from research published between January 2013 and March 2024. The review process followed the PRISMA Scoping Review guidelines and a critical appraisal of studies with both clinical and cost outcomes was accomplished using JBI check lists.

Results: The literature search identified 2981 articles for screening, 46 of which satisfied all inclusion/exclusion criteria. 26 studies focused exclusively on pharmacists and nine studies had a mix of competencies in addition to a pharmacist while the remaining 11 studies explored various other professional groups. Most interventions targeted patients with cardiovascular diseases and/or multimorbidity ($n = 26$) while five studies addressed the prevention of hospitalizations and five targeted polypharmacy. Positive impacts on clinical outcomes were observed in 34 studies, two studies declared mixed effect, five studies reported the intervention to have no dominance over usual care, and five studies lacked evidence in either way. Five out of eight studies exploring cost outcomes had positive impacts while three studies lacked evidence to declare impact.

Conclusions: There is most evidence on adding pharmacists to a team of primary care doctors and nurses when targeting cardiovascular, polypharmaceutical, and patients with multimorbid, chronic diseases. Evidence on positive clinical impact is most convincing, but cost savings were also projected. There is a research gap considering other professionals' impact on clinical outcomes and costs. Comparative, long-term research on the field is needed.

Supplementary Information: The online version contains supplementary material available at [10.1186/s12913-025-13243-1](https://doi.org/10.1186/s12913-025-13243-1).

Keywords: Clinical outcomes; Cost outcomes; Multidisciplinary team; Primary care; Quadruple aim.

Conflict of interest statement

Declarations. Ethics approval and consent to participate: Not applicable. Consent for publication: Not applicable. Competing interests: The authors declare no competing interests.

- [87 references](#)
- [2 figures](#)

Supplementary info

Publication typesExpand

Full text links

[Proceed to details](#)

Cite

4

PLoS One

-
-
-

. 2025 Aug 4;20(8):e0329372.

doi: [10.1371/journal.pone.0329372](https://doi.org/10.1371/journal.pone.0329372). eCollection 2025.

[The evolution of comorbidities in chronic diseases among Chinese middle-aged and elderly people: Evidence from the CHARLS \(2015-2020\)](#)

[Zihui Zhang¹](#), [Chuhui Hu¹](#), [Yufeng Cai¹](#), [Fei Liu²](#), [Yongheng Duan²](#), [Xusheng Wu²](#), [Dehua Hu¹](#)

Affiliations Expand

- PMID: 40758673
- PMCID: [PMC12321096](#)
- DOI: [10.1371/journal.pone.0329372](#)

Abstract

Background: The comorbidity of chronic diseases among middle-aged and elderly people is a global public health concern that has attracted great attention in recent years. It is crucial to explore the evolutionary pattern of chronic disease comorbidity in Chinese middle-aged and elderly people and to reveal the developmental trajectory of chronic diseases in this population.

Methods: Data from the China Health and Retirement Longitudinal Study (CHARLS 2015-2020) were utilized for the fixed cohort analysis. Based on the prevalence information of 14 chronic diseases (including hypertension, dyslipidemia, diabetes, cancer, chronic lung diseases, liver disease, heart disease, stroke, kidney disease, stomach diseases, emotional problems, memory-related diseases, arthritis, and asthma) among 10,089 participants aged ≥ 45 years, association rules and cluster analysis were used to identify trends and trajectories of comorbidities in the middle-aged and elderly populations in China.

Results: The analysis revealed that the comorbidity rate of the 14 chronic diseases showed a consistent annual increase from 2015-2020. By 2020, over 85% of patients diagnosed with a single chronic condition exhibited concurrent multimorbidity. This epidemiological progression was paralleled by a progressive increase in detected disease associations: binary comorbidities rose from three significant associations in 2015-10 in 2020, whereas higher-order combinations expanded from one ternary association in 2015-35 ternary and 18 quaternary associations by 2020. Notably, hypertension maintained a central position across all identified comorbidity clusters. The comorbidity patterns identified in 2015 included respiratory, liver and kidney, and cardio-cerebral comorbidity patterns and cancer and emotional problems. The comorbidity patterns identified in 2018 included respiratory, liver and kidney, cerebrovascular, and cardiovascular metabolic comorbidity patterns. The comorbidity pattern in 2020 was the same as that in 2018.

Conclusion: The issues of comorbidities in chronic diseases among Chinese middle-aged and elderly people is significant, with observed variations in the comorbidity patterns across different time periods. The development of clinical assessment and management guidelines for chronic diseases comorbid with key conditions, such as hypertension and dyslipidemia, is recommended. These guidelines aim to facilitate the co-management, co-treatment, and co-reduction of multiple diseases among middle-aged and elderly people.

Copyright: © 2025 Zhang et al. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Conflict of interest statement

The authors have declared that no competing interests exist.

- [56 references](#)
- [4 figures](#)

Supplementary info

MeSH terms, Supplementary conceptsExpand

Full text links

[Proceed to details](#)

Cite

5

Prim Health Care Res Dev

-
-
-

. 2025 Aug 4:26:e68.

doi: [10.1017/S1463423625100145](https://doi.org/10.1017/S1463423625100145).

[Preventing decompensation among multimorbid outpatients in residential care: a cohort study with a six-month follow-up to prevent decompensation among multimorbid outpatients in residential care](#)

[Paul Aujoulat^{1,2}](#), [Jean Yves Le Reste^{1,2}](#), [Lucas Beurton-Couraud^{1,2}](#), [Marie Barais^{1,2}](#), [Benoit Chiron^{1,2}](#), [Pierre Barraine^{1,2}](#), [Morgane Guillou-Landreat²](#), [Delphine Le Goff^{1,2}](#)

Affiliations Expand

- PMID: [40755129](https://pubmed.ncbi.nlm.nih.gov/40755129/)
- DOI: [10.1017/S1463423625100145](https://doi.org/10.1017/S1463423625100145)

Abstract

Aim: The European General Practitioners Research Network (EGPRN) designed and validated a comprehensive definition of multimorbidity using a systematic literature review and qualitative research throughout Europe. This survey assessed which criteria in the EGPRN concept of multimorbidity could detect decompensating patients in residential care within a primary care cohort at a six-month follow-up.

Method: Family physicians included all multimorbid patients encountered in their residential care homes from July to December 2014. Inclusion criteria were those of the EGPRN definition of multimorbidity. Exclusion criteria were patients under legal protection and those unable to complete the 2-year follow-up. Decompensation was defined as the occurrence of death or hospitalization for more than seven days. Statistical analysis was undertaken with uni- and multi-variate analysis at a six-month follow-up using a combination of approaches including both automatic classification and expert decision. A multiple correspondence analysis and a hierarchical clustering on principal components confirmed the consistency of the results. Finally, a logistic regression was performed to identify and quantify risk factors for decompensation. **Findings:** About 12 family physicians participated in the study. In the study, 64 patients were analyzed. On analyzing the characteristics of the participants, two statistically significant variables between the two groups (decompensation and Nothing To Report): pain ($p = 0.004$) and the use of psychotropic drugs ($p = 0.019$) were highlighted. The final model of the logistic regression showed pain as the main decompensation risk factor.

Conclusion: Action should be taken by the health teams and their physicians to prevent decompensation in patients in residential care who are experiencing pain.

Keywords: Family medicine; multimorbidity; prevention.

Supplementary info

MeSH termsExpand

Full text links

[Proceed to details](#)

Cite

6

BMJ Open

-
-
-

. 2025 Aug 3;15(8):e102086.

doi: [10.1136/bmjopen-2025-102086](https://doi.org/10.1136/bmjopen-2025-102086).

[Effects of a digital tool implementing the German S3 clinical practice guideline for multimorbidity in primary care \(gp-multitool.de\): study protocol for a cluster-randomised controlled trial](#)

[Ingmar Schäfer](#)¹, [Agata Menzel](#)², [Susanne Lezius](#)³, [Linda Krause](#)³, [Antonia Zapf](#)³, [Dagmar Lühmann](#)², [Martin Scherer](#)², [Valentina Paucke](#)², [Julia Nothacker](#)²

Affiliations Expand

- PMID: [40754332](#)
- PMCID: [PMC12320032](#)
- DOI: [10.1136/bmjopen-2025-102086](https://doi.org/10.1136/bmjopen-2025-102086)

Abstract

Introduction: Multimorbidity is prevalent and associated with complex treatment requirements. In order to assist general practitioners (GPs) addressing these requirements, the web application [gp-multitool.de](#) has been designed, which facilitates implementation of the German clinical practice guideline for multimorbidity. We will conduct a cluster-randomised clinical trial evaluating an intervention based on this tool. This protocol summarises methods and discusses ethics and dissemination of this study.

Methods and analysis: Participating patients are recruited by cooperating GP practices. Inclusion criteria are an age of 65 years or older, enrolment in any disease management programme and multimorbidity operationalised by two additional chronic conditions. To avoid postrandomisation selection bias, practices are randomised as clusters after baseline assessment of all participating patients from the respective practice. In our intervention, patients receive access to different assessments including patient preferences by email, fill out the electronic assessment forms on any device with access to the internet, receive a medication review and discuss the assessment results with their GPs. GPs in the control group do not have access to the digital tool and provide care as usual. The primary outcome is staying at least once for at least one night in hospital during the 12-month observation period. Secondary outcomes are contacts with GPs and outpatient specialists, self-reported health, health-related quality of life, patient satisfaction and GP-reported and patient-reported quality of care. A sample size of 660 patients from 66 GP practices is needed. Data are analysed by mixed effects regression models.

Ethics and dissemination: Ethics approval was obtained by the ethics committee of the Medical Association of Hamburg (2022-1 00 786-BO-ff). Study results will be presented on scientific conferences and published in journal articles. In addition, healthcare

professionals, patient representatives and the interested public will be informed about study results at a symposium.

Trial registration number: The study was registered in clinicaltrials.gov ([NCT06831994](https://clinicaltrials.gov/ct2/show/study/NCT06831994)).

Keywords: Clinical Decision-Making; Digital Technology; Multimorbidity.

© Author(s) (or their employer(s)) 2025. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ Group.

Conflict of interest statement

Competing interests: MS, DL and IS are coauthors of the clinical practice guideline 'multimorbidity' of the German Association for General Medicine. All authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

- [33 references](#)

Supplementary info

Publication types, MeSH terms, Associated data

"asthma"[MeSH Terms] OR asthma[Text Word]

1

Geriatr Gerontol Int

-
-
-

. 2025 Aug 8.

doi: [10.1111/ggi.70145](https://doi.org/10.1111/ggi.70145). Online ahead of print.

[Challenging the independent role of sarcopenia in asthma mortality and lung function decline](#)

[Brijesh Sathian](#)¹, [Farah Rahat](#)¹, [Reham Kamal Aboshdid](#)¹, [Ebtehal Obeidat](#)¹, [Hanadi Al Hamad](#)¹

Affiliations Expand

- PMID: [40781558](https://pubmed.ncbi.nlm.nih.gov/40781558/)
- DOI: [10.1111/ggi.70145](https://doi.org/10.1111/ggi.70145)

No abstract available

Supplementary info

Publication types [Expand](#)

Full text links

[Proceed to details](#)

Cite

2

J Allergy Clin Immunol Pract

-
-
-

. 2025 Aug 6:S2213-2198(25)00760-3.

doi: [10.1016/j.jaip.2025.07.049](https://doi.org/10.1016/j.jaip.2025.07.049). Online ahead of print.

[Impact of demographics on mepolizumab effectiveness in severe asthma: One-year REALITI-A subanalysis \(12/12 words\)](#)

[Geoffrey Chupp](#)¹, [Liam G Heaney](#)², [Girolamo Pelaia](#)³, [Carlos Almonacid](#)⁴, [Aoife Maxwell](#)⁵, [Lingjiao Zhang](#)⁶, [Rafael Alfonso-Cristancho](#)⁷, [Peter Howarth](#)⁸, [Guy Brusselle](#)⁹

Affiliations [Expand](#)

- PMID: [40780384](https://pubmed.ncbi.nlm.nih.gov/40780384/)
- DOI: [10.1016/j.jaip.2025.07.049](https://doi.org/10.1016/j.jaip.2025.07.049)

Abstract

Background: There is need for better understanding of the impact of demographic/clinical characteristics on outcomes with mepolizumab in patients with severe asthma.

Objective: Assess mepolizumab outcomes in severe asthma by demographic/clinical characteristics.

Methods: REALITI-A (GSK ID: 204710) was an international, prospective, observational study of adults with severe asthma (eosinophilic phenotype) initiating mepolizumab (100 mg subcutaneous). This 1-year post hoc subanalysis assessed outcomes stratified by sex, age of asthma onset, body mass index (BMI), smoking status, disease duration, and fractional exhaled nitric oxide (FeNO) in parts per billion. Outcomes included clinically significant asthma exacerbations (CSEs), maintenance oral corticosteroids (mOCS)

usage, Asthma Control Questionnaire (ACQ)-5 scores, and pre-bronchodilator (pre-BD) forced expiratory volume in 1 second (FEV₁) between the pre-treatment/baseline and 12-month follow-up.

Results: Among 822 enrolled patients, 63% were female; of those with available data 79% were ≥18 years at asthma onset, 60% had never smoked, and 37% were former smokers. Across all subgroups following mepolizumab treatment, CSEs were significantly reduced by 53-79%; except the current smoker subgroup mOCS doses were numerically reduced by 50-100% and least squares (LS) mean ACQ-5 scores significantly improved by -1.02 to -1.57; LS mean pre-BD FEV₁ significantly improved by 3.1-8.4% (except current smoker, BMI≥30 and FeNO <25 and 25-<50 subgroups). There were trends towards greater reduction in CSE rates with older age of onset, BMI <25 kg/m² and non-/former smoker subgroups.

Conclusion: Mepolizumab improved outcomes in patients with severe asthma over a varied demographic spectrum in this large real-world study.

Keywords: Asthma; Asthma Control Questionnaire; asthma exacerbation; forced expiratory volume in 1 second; mepolizumab; severe asthma.

Copyright © 2025. Published by Elsevier Inc.

Full text links

[Proceed to details](#)

Cite

3

J Allergy Clin Immunol Pract

-
-
-

. 2025 Aug 6:S2213-2198(25)00759-7.

doi: 10.1016/j.jaip.2025.07.048. Online ahead of print.

[The association between heavy alcohol use and lung function: a clinical study of adult-onset asthma](#)

[Laura von Hintze](#)¹, [Pinja Ilmarinen](#)², [Iida Vähätalo](#)³, [Leena E Tuomisto](#)², [Lauri Lehtimäki](#)⁴, [Onni Niemelä](#)⁵, [Hannu Kankaanranta](#)⁶

Affiliations Expand

- PMID: 40780382

- DOI: [10.1016/j.jaip.2025.07.048](https://doi.org/10.1016/j.jaip.2025.07.048)

Abstract

Background: In animal studies, alcohol exposure has been reported to damage lungs. However, no human studies exist on the association between alcohol consumption and lung function in asthma.

Objective: To evaluate association between heavy alcohol consumption and lung function decline in patients with adult-onset asthma.

Methods: In the Seinäjoki Adult Asthma Study, 201 patients were followed for 12 years after diagnosis of new-onset asthma. Based on detailed questionnaires and laboratory indices of heavy drinking, patients were classified to heavy alcohol consumers or non-heavy alcohol consumers. Spirometry evaluation points were: 1) baseline before initiation of inhaled corticosteroids (ICS), 2) the maximum lung function during the first 2.5 years after diagnosis and start of ICS treatment ($Max_{0-2.5}$) and 3) after 12 years.

Results: Between asthma diagnosis and follow-up, the median (IQR) annual decline in forced vital capacity (FVC) was -30 mL (-51 to -11 mL) in heavy alcohol consumers and -5 mL (-26 to 25 mL) in non-heavy alcohol consumers ($p < 0.001$). This was largely explained by a decline in FVC between $Max_{0-2.5}$ and follow-up ($p = 0.041$) and maybe by a diminished effect of ICS. Annual decline in forced expiratory volume in 1 s (FEV_1) was -26 mL (-52 to 0 mL) in heavy alcohol consumers and -17 mL (-31 to 6 mL) in non-heavy alcohol consumers ($p = 0.022$). In multivariate regression analysis, heavy alcohol consumption was a significant predictor of accelerated decline in FVC.

Conclusions: In patients with objectively verified adult-onset asthma, heavy alcohol consumption is associated with accelerated loss of lung function.

Keywords: FEV_1 ; adult; alcohol consumption; asthma; follow-up; lung function.

Copyright © 2025. Published by Elsevier Inc.

Full text links

[Proceed to details](#)

Cite

4

J Allergy Clin Immunol Pract

-
-
-

. 2025 Aug 6:S2213-2198(25)00763-9.

doi: 10.1016/j.jaip.2025.07.051. Online ahead of print.

[Risk Factors and Mechanisms Leading to Preschool Recurrent Wheeze and Asthma](#)

[Jose A Castro-Rodriguez¹](#), [Alba A B Wolters²](#), [Carlos E Rodriguez-Martinez³](#), [Jocelyn M Biagini⁴](#), [Juan C Celedón⁵](#), [Adnan Custovic⁶](#), [Gerard H Koppelman²](#), [Wanda Phipatanakal⁷](#), [Sejal Saglani⁶](#), [Erick Forno⁸](#)

Affiliations Expand

- PMID: 40780381
- DOI: [10.1016/j.jaip.2025.07.051](https://doi.org/10.1016/j.jaip.2025.07.051)

Abstract

Preschool recurrent wheezing is a prevalent and heterogeneous condition that can develop into childhood asthma, significantly damaging public health. Preschool recurrent wheeze and asthma are influenced by a multifactorial interplay of biological, environmental, early-life, behavioural, and psychosocial factors. Genes as GSDMB, ORMDL3, CDHR3, ANXA1, and IL33/IL1RL1, and methylation of cell-type-specific CpG-sites, are associated with airway-remodelling, increased inflammatory responses, and enhanced susceptibility to environmental factors. Biomarkers, such as allergen sensitization, blood eosinophil levels, fractional exhaled nitric oxide, and volatile organic compounds, may guide treatment decisions based on the type of immune response in wheezing episodes. Several asthma-predicted clinical indices have been developed, and some of them have been validated. Although lower airway samples obtained through bronchial-alveolar lavage and biopsy in young children are limited, they are essential in understanding the pathophysiology and developing personalized treatment of recurrent preschool wheezing. Early evaluations of lung function, airway hyperresponsiveness, and bronchodilator response can be valuable objective tools. However, due to physiological variability and inconsistent methods and definitions, these tests cannot confirm or rule out a diagnosis of asthma at preschool age. Future research should investigate the interplay of factors across biological, environmental, and social domains to enhance predictive models and inform targeted interventions that promote health equity and reduce the global burden of preschool recurrent wheeze and asthma.

Keywords: asthma; epigenetic; genetic; lung function; mechanisms; preschool; recurrent wheezing; risk factors.

Copyright © 2025. Published by Elsevier Inc.

Full text links

[Proceed to details](#)

Cite

5

Review

Expert Rev Clin Pharmacol

-
-
-

. 2025 Aug 8:1-11.

doi: [10.1080/17512433.2025.2546141](https://doi.org/10.1080/17512433.2025.2546141). Online ahead of print.

[Current status of biological therapy use for older adults with severe asthma](#)

[Alessandra Tomasello](#)^{1,2}, [Alida Benfante](#)¹, [Lorena Gentile](#)¹, [Giulia Genduso](#)¹, [Alessia Lombardino](#)¹, [Dario Macaluso](#)¹, [Nicola Scichilone](#)¹

Affiliations Expand

- PMID: 40776574
- DOI: [10.1080/17512433.2025.2546141](https://doi.org/10.1080/17512433.2025.2546141)

Abstract

Introduction: The management of severe asthma in older adults is an increasingly important clinical challenge. Aging-associated structural, functional, and immunological changes contribute to a distinct geriatric asthma phenotype, often marked by mixed inflammation, comorbidities, and reduced treatment responsiveness.

Areas covered: This review provides an overview of current biologic therapies approved for severe asthma and examines existing clinical evidence regarding efficacy, safety, and real-world outcomes in geriatric patients. Clinical challenges include the heterogeneity of asthma phenotypes in this age group, and the impact of multimorbidity and polypharmacy on treatment outcomes.

Expert opinion: A geriatric-centered approach to severe asthma is essential, emphasizing early initiation of biologic therapies, individualized risk-benefit analysis, and improved inclusion in research. The modulation of systemic inflammation, while carefully monitored, may bring also systemic benefits that may go beyond respiratory system. Achieving asthma remission in older adults is now a feasible goal, contingent upon proactive, tailored treatment strategies supported by more inclusive evidence.

Keywords: Asthma; biologic therapies; geriatric asthma; older adults; severe asthma.

Supplementary info

Publication typesExpand

Full text links

[Proceed to details](#)

Cite

6

BMJ Open

-
-
-

. 2025 Aug 6;15(8):e099447.

doi: 10.1136/bmjopen-2025-099447.

[BREATHEIN: Better understanding obstructive REspiratory Airway disease Treatment and HEalth: a nationwide INvestigative survey in Denmark-a study protocol](#)

[Kristina Kock Hansen^{1,2,3}](#), [Lone Lund Pedersen⁴](#), [Anders Løkke^{4,3}](#), [Ole Hilberg^{4,3}](#)

Affiliations Expand

- PMID: 40774719
- DOI: [10.1136/bmjopen-2025-099447](https://doi.org/10.1136/bmjopen-2025-099447)

Free article

Abstract

Introduction: Understanding patient perspectives on asthma and chronic obstructive pulmonary disease (COPD) is limited, with no prior studies employing such a large-scale, proactive survey to systematically target individuals with a confirmed prescription for inhalation medication. This study aims to explore how patients with asthma or COPD manage their lives, including treatment experiences, symptoms and impacts on daily life.

Methods and analysis: A nationwide survey will be launched in January 2025, targeting adults (≥ 18 years) in Denmark diagnosed with asthma or COPD and prescribed or dispensed inhalation medication between 1 October 2023 and 30 September 2024. Data from the Danish Health Data Authority's Register of Medicinal Product Statistics will

identify eligible individuals. The electronic survey will be distributed via e-Boks to approximately 450 000 individuals. The questionnaire integrates validated tools-COPD Assessment Test, Modified Medical Research Council scale, EuroQol 5-Dimension 5-Level and Asthma Control Test-alongside expert-developed questions on symptoms, diagnosis, disease control, treatment and patient experiences. Questionnaire development included 10 cognitive interviews with patients from the Outpatient Clinic at Vejle Hospital. Descriptive statistics will be used to analyse both continuous and categorical data, with sensitivity analyses conducted as well. Data management will be handled in Research Electronic Data Capture, and statistical analyses will be performed using Stata V.18.0.

Ethics and dissemination: The study is registered with the Danish Data Protection Agency (24/5229) and Open Patient Data Explorative Network (OP_2094) and follows the Declaration of Helsinki. Results will be published in peer-reviewed journals, presented at national and international conferences and shared through patient associations.

Keywords: Asthma; Chronic airways disease; Patient Participation; Pulmonary Disease, Chronic Obstructive; Surveys and Questionnaires.

© Author(s) (or their employer(s)) 2025. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ Group.

Conflict of interest statement

Competing interests: None declared.

Supplementary info

MeSH terms Expand

Full text links

[Proceed to details](#)

Cite

7

Pulm Pharmacol Ther

-
-
-

. 2025 Aug 5:102381.

doi: 10.1016/j.pupt.2025.102381. Online ahead of print.

[Clinical remission at two years post-diagnosis of asthma and its association with clinical outcomes: A retrospective cohort study in asthma patients with maintenance inhaler therapy](#)

[Hyun-Jun Park¹](#), [Chang Hoon Lee²](#), [Jung-Kyu Lee³](#), [Deog Kyeom Kim⁴](#), [Hyun-Woo Lee⁵](#)

Affiliations Expand

- PMID: 40774410
- DOI: [10.1016/j.pupt.2025.102381](#)

Abstract

Clinical remission (CR) has emerged as a potential therapeutic goal in patients with severe asthma eligible for biologic agents. However, its impact on long-term outcomes in asthma patients managed with maintenance inhaler therapy remains unclear. In this retrospective cohort study, we evaluated adult asthma patients on maintenance inhalers to investigate the long-term outcomes associated with achieving CR. CR was defined as at least one year without exacerbations, well-controlled symptoms, no use of systemic corticosteroids, and stable lung function, assessed two years after asthma diagnosis. We compared the trajectory of forced expiratory volume in one second (FEV₁) and the annual rate of exacerbations between CR and non-CR groups in a 1:1 propensity score-matched population. Among 549 patients followed for a median of 7 years, 88 (16%) met the criteria for CR. After matching, 76 patients were included in each group. Compared to the non-CR group, the CR group showed a significantly lower proportion of patients with annual FEV₁ decline exceeding 60 mL (8.6% vs. 25%, P = 0.010). A linear mixed-effects model showed that the CR group had a significantly slower rate of FEV₁ decline, with an annual difference of 32.7 mL (95% CI 6.7 to 58.7; P = 0.014) compared with the non-CR group. The CR group also had a lower annual rate of moderate-to-severe exacerbations (0.17 events/year [IQR 0, 0.37] vs. 0.42 events/year [IQR 0, 1], P = 0.007). In conclusion, achieving CR in asthma patients receiving maintenance inhaler therapy was associated with a slower decline in lung function and fewer exacerbations. These findings support the potential role of CR as a long-term therapeutic goal.

Keywords: Asthma; clinical remission; exacerbation; lung function decline.

Copyright © 2025. Published by Elsevier Ltd.

Conflict of interest statement

Declaration of Competing Interest The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Full text links

[Proceed to details](#)

Cite

8

Sports Med Open

-
-
-

. 2025 Aug 7;11(1):93.

doi: [10.1186/s40798-025-00897-8](https://doi.org/10.1186/s40798-025-00897-8).

[Health among Retired Great Britain's Olympic Athletes: A cross-sectional Study of Disease and Multimorbidity](#)

[Dale J Cooper](#)¹, [Julius Sim](#)²

Affiliations Expand

- PMID: [40772983](https://pubmed.ncbi.nlm.nih.gov/40772983/)
- PMCID: [PMC12332171](https://pubmed.ncbi.nlm.nih.gov/PMC12332171/)
- DOI: [10.1186/s40798-025-00897-8](https://doi.org/10.1186/s40798-025-00897-8)

Abstract

Background: Currently, there is a paucity of long-term health data for retired athletes. This study describes the prevalence of common morbidities and multimorbidity among retired Great Britain's (GB) Olympic athletes, compared to a general population comparator group.

Methods: A cross-sectional study of retired athletes was undertaken. The English Longitudinal Study of Ageing (ELSA) served as the reference population. Age- and sex-standardized morbidity ratios (SMRs) and odd ratios (ORs) determined where morbidity and multimorbidity prevalence amongst retired athletes exceeded or were inferior to those of the reference population.

Results: Retired athletes (n = 493) were less likely (SMR < 1) than controls (n = 8024) to report diabetes (0.43, 99% CI 0.22, 0.74), stroke (0.39, 99% CI 0.12, 0.90), obesity (0.35, 99% CI 0.23, 0.50), asthma (0.29, 99% CI 0.12, 0.59), lung disease (0.29, 99% CI 0.06, 0.81), angina (0.18, 99% CI 0.05, 0.46), and eye disorders (0.06, 99% CI 0.01, 0.18). In addition, abnormal heart rhythm (0.45, 99% CI 0.40, 0.54) and osteoporosis (0.46, 99% CI 0.42, 0.51) were lower in female athletes. Retired athletes were more likely (SMR > 1) than controls to report melanoma or other skin cancer (5.64, 99% CI 2.80, 10.06) and

osteoarthritis (1.44, 99% CI 1.18, 1.75). There were no differences detected in cancers of the breast, prostate, colon, bowel or bladder. Multimorbidity was less prevalent among retired athletes (OR 0.50, 99% CI 0.38, 0.67).

Conclusions: Retired athletes had superior cardiovascular health and a lower risk of multimorbidity, but were more at risk of melanoma or other skin cancer and osteoarthritis.

Keywords: Chronic Diseases; Melanoma; Multimorbidity; Olympic Athletes; Prevalence.

© 2025. The Author(s).

Conflict of interest statement

Declarations. Ethics Approval and Consent to Participate: The Faculty of Medicine and Health Sciences Research Ethics Committee, University of Nottingham (Ethics Reference No: K13022014). It was agreed in the ethics approval, and with the British Olympic Association and the British Olympic Associations Athletes' Commission, that implied consent would be used to avoid the use of personal signatures that could identify the GB Olympian. The letter of invitation and the participant information sheet made it explicit that by completing and returning the Olympian questionnaire, GB Olympians gave implied consent. GB Olympians were informed that if they completed and returned the Olympian questionnaire, they were consenting to have their details stored for future analysis. GB Olympians were informed that they were giving authorization for inclusion of their data in public release data sets, such as journal articles and press releases. The ELSA data are publicly available. Ethics approval for ELSA was previously provided by the NHS Research Ethics Committees under the National Research and Ethics Service (NRES). Anonymized ELSA data for the present study were provided by the UK Data Service. **Consent for Publication:** It was made explicitly clear to GB participants that by completing and returning a questionnaire, they gave implied consent for publication from the dataset. Anonymized ELSA data are publicly available from the UK Data Service. **Competing Interests:** The authors have no relevant financial or non-financial interests to disclose. The authors have no conflicts of interest to declare that are relevant to the content of this article. All authors certify that they have no affiliations with or involvement in any organization or entity with any financial interest or non-financial interest in the subject matter or materials discussed in this manuscript. The authors have no financial or proprietary interests in any material discussed in this article.

- [38 references](#)
- [3 figures](#)

Supplementary info

Grants and fundingExpand

Full text links

[Proceed to details](#)

Cite

9

Ann Am Thorac Soc

-
-
-

. 2025 Aug 7.

doi: [10.1513/AnnalsATS.202502-185OC](https://doi.org/10.1513/AnnalsATS.202502-185OC). Online ahead of print.

[Risk Profile of Young Adults with Chronic Obstructive Pulmonary Disease](#)

[Andrea S Gershon](#)¹²³⁴, [Joseph Munn](#)⁵²⁶, [Rachel E McGihon](#)⁷, [Priscila Pequeno](#)², [Jin Luo](#)², [Alina Blazer](#)³, [Tetyana Kendzerska](#)^{8,2}, [Shawn D Aaron](#)⁸, [Teresa To](#)⁷

Affiliations Expand

- PMID: 40772931
- DOI: [10.1513/AnnalsATS.202502-185OC](https://doi.org/10.1513/AnnalsATS.202502-185OC)

Abstract

Background: COPD risk profiles have been described in populations comprised of or including older adults, leaving factors associated with COPD in younger adults overlooked. We aimed to determine patient profiles of physician diagnosed COPD in younger adults.

Methods: A cohort study was conducted using population-based survey data linked to health administrative data from Ontario, Canada from 2007 to 2018. Younger adults 35 to 55 years newly diagnosed with COPD by physicians were matched to controls without physician diagnosed COPD. Multivariable conditional logistic regression models were used to identify statistically significant predictors of COPD. To contextualize results, the analysis was repeated in older adults.

Findings: There were 1094 younger adults with new physician diagnosed COPD. In adjusted analysis, previous influenza or pneumonia, higher level of comorbidity, a mental health condition and a history of asthma independently predicted COPD diagnosis in younger adults. With the exception of mental health conditions, these same variables predicted COPD diagnosis in older adults. However, male sex, lower income, a history of respiratory disease other than asthma, and being overweight or underweight predicted COPD diagnosis in older but not in younger adults.

Interpretation: Having a mental health condition was associated with physician diagnosed COPD in younger adults while male sex, lower income, a history of respiratory disease other than asthma, and being overweight or underweight did not. This new knowledge can be used to dispel stereotypes about COPD. They also suggest that different screening criteria should be considered for younger adults.

Full text links

[Proceed to details](#)

Cite

10

J Allergy Clin Immunol

-
-
-

. 2025 Aug 4:S0091-6749(25)00803-6.

doi: 10.1016/j.jaci.2025.07.015. Online ahead of print.

[Genetic characterization of preschool wheeze phenotypes](#)

[Kasper Fischer-Rasmussen¹](#), [Raquel Granell²](#), [Anders Ulrik Eliassen³](#), [Eskil Kreiner³](#), [Casper-Emil Tingskov Pedersen³](#), [Yang Luo³](#), [Bo Chawes³](#), [Jakob Stokholm³](#), [Ann-Marie Malby Schoos³](#), [Ashish Kumar⁴](#), [Anne-Marie Nybo Andersen⁵](#), [Bjarke Feenstra⁵](#), [Frank Geller⁵](#), [Valérie Siroux⁶](#), [Florence Demenais⁶](#), [Emmanuelle Bouzigon⁶](#), [Vincent Jaddoe⁷](#), [Ralf van der Valk⁷](#), [Liesbeth Duijts⁸](#), [Jordi Sunyer⁹](#), [Mónica Guxens¹⁰](#), [Marcella Marinelli¹¹](#), [Mariona Bustamante¹²](#), [Joachim Heinrich¹³](#), [Marie Standl¹⁴](#), [John Curtin¹⁵](#), [Angela Simpson¹⁶](#), [Clare Murray¹⁶](#), [Bo Jacobsson¹⁷](#), [Ronny Myhre¹⁸](#), [Craig E Pennell¹⁹](#), [Denise Daley²⁰](#), [Carole Ober²¹](#), [James E Gern²²](#), [Daniel Jackson²²](#), [Dorret I Boomsma²³](#), [Jouke-Jan Hottenga²³](#), [Abdel Abdellaoui²³](#), [John W Holloway²⁴](#), [Sam Collins²⁵](#), [Stephen Turner²⁶](#), [S Hasan Arshad²⁷](#), [Anhar Ullah²⁸](#), [Erik Melén⁴](#), [John Henderson²⁹](#), [Hans Bisgaard³⁰](#), [Anders Gorm Pedersen³¹](#), [Adnan Custovic³²](#), [Judith M Vonk³³](#), [Gerard H Koppelman³⁴](#), [Michael Kabesch³⁵](#), [Klaus Bønnelykke³](#); [GABRIEL consortium, the EARly Genetics and Lifecourse Epidemiology \(EAGLE\) Consortium](#)

Affiliations Expand

- PMID: 40769318
- DOI: [10.1016/j.jaci.2025.07.015](https://doi.org/10.1016/j.jaci.2025.07.015)

Abstract

Rationale: Preschool wheeze is a heterogeneous and poorly understood clinical syndrome. As a result, current treatments are insufficient, and prevention is not possible.

Objectives: To increase understanding of the genetic susceptibility and underlying disease mechanisms of wheeze phenotypes in early childhood through large-scale genome-wide association study (GWAS) analyses.

Methods: We performed meta-analyses of GWAS on early-onset wheeze, defined as recurrent wheeze or asthma in the first 3 years of life, and subtypes hereof, including early transient and persistent wheeze, defined by asthma/wheeze at age 3 and subsequent remission or persistence at age 6 respectively. The discovery analyses included data on more than 13,000 children from 15 cohorts and replication was sought through meta-analyses of data from 7 additional cohorts including up to 5,000 children. Genetic variants associated with asthma-related traits in adulthood (adult asthma, atopy, eosinophils and lung function) were used to quantify the degree to which genetic risk influencing asthma-related adult traits also influences genetic risk of preschool wheeze.

Results: Variants near the GSDMB gene in the 17q-region showed genome-wide significant association with early onset (rs2305480, OR = 1.26 (1.17 - 1.33), $P = 2.30E-16$), and persistent (rs11078926, OR = 1.43 (1.30 - 1.578), $P = 2.14E-11$), but not with early transient wheeze (rs1054609, OR = 1.08 (0.98 - 1.18), $P = 0.094$). Other known asthma loci were associated with early onset wheeze, particularly CDHR3. Additionally, increased genetic risk to early onset wheeze was associated with genetic risk for asthma at older ages, atopy, eosinophil count and lower adult lung function. This was driven by persistent wheeze while transient early wheeze was only associated with low lung function.

Conclusions: Preschool wheeze phenotypes displayed distinct patterns of single SNP associations and genetic enrichment with asthma related traits. These results indicate distinct etiologies of wheeze phenotypes, which could inform studies in optimization of prevention and treatment strategies.

Keywords: 17q21-12; Asthma comorbidities; Genetic overlap; Genome-wide association study; Preschool wheeze.

Copyright © 2025. Published by Elsevier Inc.

Full text links

[Proceed to details](#)

Cite

J Asthma

-
-
-

. 2025 Aug 6:1-12.

doi: [10.1080/02770903.2025.2494233](https://doi.org/10.1080/02770903.2025.2494233). Online ahead of print.

[Impact of asthma age of onset or duration on efficacy of dupilumab in moderate-to-severe type 2 asthma](#)

[William W Busse](#)¹, [Monica Kraft](#)², [Christian Domingo](#)³, [Inés de Mir-Messa](#)⁴, [Diego J Maselli](#)⁵, [Xavier Soler](#)⁶, [Changming Xia](#)⁶, [Nami Pandit-Abid](#)⁷, [Juby A Jacob-Nara](#)⁷, [Harry J Sacks](#)⁶, [Paul J Rowe](#)⁷, [Yamo Deniz](#)⁶

Affiliations Expand

- PMID: 40767333
- DOI: [10.1080/02770903.2025.2494233](https://doi.org/10.1080/02770903.2025.2494233)

Abstract

Objective: Age of asthma onset is critical for determining heterogeneous asthma phenotypes. How onset and duration affect therapeutic response is not well understood. Phase 3 QUEST ([NCT02414854](#)) and open-label extension TRAVERSE ([NCT02134028](#)) studies demonstrated dupilumab's efficacy up to three years in patients ≥ 12 years with uncontrolled, moderate-to-severe asthma. We assessed how age of asthma onset and asthma duration affect clinical efficacy of dupilumab in patients with moderate-to-severe type 2 inflammatory asthma.

Methods: This *post hoc* analysis included patients with type 2 asthma from QUEST who enrolled in TRAVERSE. Annualized severe exacerbation rates (AER), change from parent study baseline (PSBL) in pre-bronchodilator forced expiratory volume in 1 s (FEV₁), and five-item Asthma Control Questionnaire (ACQ-5) score were assessed according to asthma age of onset (<18 years, 18-40 years, >40 years) and duration (<20 years, ≥ 20 years).

Results: In all subgroups, treatment with dupilumab through QUEST and TRAVERSE progressively reduced AER (TRAVERSE Week 48-96 range, 0.160-0.333), increased pre-bronchodilator FEV₁ (TRAVERSE Week 96 change from PSBL range, 0.20-0.44 L), and reduced ACQ-5 scores (TRAVERSE Week 48 change from PSBL range, -1.63 to -1.84). In patients who received placebo during QUEST, treatment with dupilumab in TRAVERSE improved AER, FEV₁, and ACQ-5 in all subgroups.

Conclusions: In patients with uncontrolled, moderate-to-severe type 2 asthma, treatment with dupilumab provides sustained, long-term exacerbation rate reductions

and improvements in lung function and asthma control, across all subgroups, with higher reductions in AER and improvements in pre-bronchodilator FEV₁ seen in patients with later onset or longer duration.

Keywords: ACQ-5; annualized severe exacerbation rates; asthma biologics; pre-bronchodilator forced expiratory volume in 1 s; treatment outcomes; uncontrolled asthma.

Full text links

[Proceed to details](#)

Cite

12

Clin Exp Allergy

-
-
-

. 2025 Aug 5.

doi: 10.1111/cea.70131. Online ahead of print.

[External Validation of the Minimal Clinically Important Difference of FeNO Using the Asthma Control Questionnaire](#)

[Jonathan Noble](#)^{1,2}, [Orlagh Bean](#)¹, [Ross Sayers](#)¹, [Ryan Cullen](#)¹, [Richard Beasley](#)^{1,2}, [Mark Weatherall](#)³

Affiliations Expand

- PMID: 40764472
- DOI: [10.1111/cea.70131](#)

Abstract

Background: The minimal clinically important difference (MCID) for fractional exhaled nitric oxide (FeNO) in asthma is uncertain. The American Thoracic Society (ATS) suggests this may be a relative change $\geq 20\%$; however, this recommendation is not validated against a clinical outcome measure. A secondary analysis of two randomised controlled trials (RCTs) examining associations between changes in FeNO and the Asthma Control Questionnaire-5 (ACQ-5) may help estimate the MCID.

Methods: The PRACTICAL and Novel START were 52-week RCTs that compared as-required short-acting beta-agonists with or without maintenance inhaled corticosteroids

(ICS) versus as-required ICS-formoterol in mild-moderate asthma. In this secondary analysis, participants with measurements of FeNO and ACQ-5 were included. FeNO was analysed on the logarithm transformed scale. Logistic regression assessed associations between FeNO and ACQ-5 changes from baseline to end of study, relative to the ACQ-5 MCID (0.5 points). A t-test was used to compare the difference in log FeNO for those whose ACQ-5 fell by the MCID for an improvement in ACQ.

Results: Data from 1553 participants were included. There was a weak association between the change in FeNO and change in ACQ-5; correlation coefficient was 0.08 ($p = 0.002$). The mean (SD) change in log FeNO for those with a clinically important improvement in ACQ-5 was -0.25 (0.64), $N = 530$; geometric mean ratio was 0.78, representing a 22% change in the geometric mean of FeNO. The change in log FeNO was -0.14 (0.60) for those without an improvement in ACQ-5, $N = 852$; geometric mean ratio was 0.87. The sensitivity and specificity for a 20% change in geometric mean FeNO were 47% and 57%, respectively.

Conclusion: Changes in FeNO are a poor surrogate for changes in ACQ-5. The magnitude of FeNO changes in participants with an MCID improvement in ACQ-5 provides weak support for the ATS recommendation that the MCID for FeNO may be about a 20% relative change.

© 2025 John Wiley & Sons Ltd.

- [28 references](#)

Supplementary info

Grants and funding [Expand](#)

Full text links

[Proceed to details](#)

Cite

13

Eur Radiol

-
-
-

. 2025 Aug 5.

doi: 10.1007/s00330-025-11886-6. Online ahead of print.

[Beyond the heart: prevalence and implications of extra-coronary findings in coronary CT angiography: a retrospective study](#)

[David A Gloor](#)¹, [Inga Todorski](#)², [Alan Peters](#)¹, [Benedikt Wagner](#)³, [Tobias Gassenmaier](#)⁴, [Justus Roos](#)⁴, [Andreas Christe](#)¹, [Lukas Ebner](#)^{1,4,5}, [Adrian T Huber](#)^{6,7,8}

Affiliations Expand

- PMID: 40762727
- DOI: [10.1007/s00330-025-11886-6](https://doi.org/10.1007/s00330-025-11886-6)

Abstract

Objectives: To evaluate the prevalence and clinical implications of extra-coronary findings in a large cohort of patients undergoing coronary computed tomography angiography (CCTA).

Materials and methods: This retrospective study analyzed data from 3295 consecutive CCTA examinations at a single tertiary center. Radiology reports were reviewed for potentially significant extra-coronary findings. Three-year follow-up evaluation was performed via hospital records. Prevalences of confirmed significant findings were determined and extrapolated to patients lost to follow-up.

Results: Extra-coronary findings were reported in 92.7% (3053/3295) of patients. Potentially significant non-cardiovascular findings were found in 25.3% (833/3295), including potentially malignant findings in 8.5% (281/3295) and significant non-malignant findings in 19.3% (637/3295). Among patients with potentially malignant findings, 40.2% (113/281) underwent follow-up, with confirmed malignancy in 28.3% (32/113). Extrapolation suggests a malignancy prevalence of up to 2.4% (95% CI: 1.8-3.2%) within the CCTA field of view, with a minimum of 1.0% if all patients lost to follow-up were assumed to have no malignancy. The most frequent significant non-malignant finding was pulmonary emphysema (10.7%; 352/3295), with extrapolated prevalence rates of 4.2% (95% CI: 2.6-5.9% for COPD and 1.8% (95% CI: 0.8-3.4%) for asthma or obstructive sleep apnea. Liver steatosis was present in 4.5% (147/3295), with an estimated prevalence of 3.1% (95% CI: 1.6-4.2%) for metabolic dysfunction-associated steatotic liver disease and 1.3% (95% CI: 0.3-2.9%) for alcohol-related liver disease.

Conclusion: Extra-coronary findings are common in CCTA and carry important clinical implications. Careful management is necessary, and additional screening protocols may benefit high-risk patients.

Key points: Question How frequently do extra-coronary findings occur in coronary CT angiography, and what is their clinical impact in patients undergoing cardiac evaluation? Findings Clinically significant extra-coronary non-cardiovascular findings were identified in 25.3% of patients, including unsuspected malignancies and relevant pulmonary and hepatic comorbidities. Clinical relevance Extra-coronary findings on coronary CT angiography are common and often clinically relevant, warranting structured assessment to support timely diagnosis and multidisciplinary patient care.

Keywords: Coronary vessels; Incidental findings; Neoplasms; Pulmonary disease; Tomography (X-ray computed).

© 2025. The Author(s).

Conflict of interest statement

Compliance with ethical standards. Guarantor: The scientific guarantor of this publication is Prof. Adrian T. Huber, MD, PhD. **Conflict of interest:** The authors of this manuscript declare no relationships with any companies, whose products or services may be related to the subject matter of the article. **Statistics and biometry:** No complex statistical methods were necessary for this paper. **Informed consent:** Written informed consent was waived by the Institutional Review Board. **Ethical approval:** Institutional Review Board approval was obtained. **Study subjects or cohorts overlap:** No study subjects or cohorts have been previously reported. **Methodology:** Retrospective Observational Performed at one institution

- [46 references](#)

Supplementary info

Grants and funding [Expand](#)

Full text links

[Proceed to details](#)

Cite

14

ERJ Open Res

-
-
-

. 2025 Aug 4;11(4):00736-2024.

doi: 10.1183/23120541.00736-2024. eCollection 2025 Jul.

[Automated computed tomographic analysis of bronchial thickness and mucus plugs in bronchiectasis with asthma](#)

[Tjeerd van der Veer](#)^{1,2}, [Eleni-Rosalina Andrinopoulou](#)^{3,4}, [Punitkumar Makani](#)⁵, [Gert-Jan Braunstahl](#)^{1,6}, [Harm A W M Tiddens](#)^{5,7}

Affiliations [Expand](#)

- PMID: 40761656

- PMID: [PMC12320113](#)
- DOI: [10.1183/23120541.00736-2024](#)

Abstract

Background: Bronchiectasis disease is characterised by cough, sputum and exacerbations, with chest computed tomography (CT) typically showing bronchial wall thickening and mucus plugging in addition to bronchial dilation. Asthma is a common comorbidity and associated with increased, eosinophilic, airway inflammation. Automated measurements of bronchial wall thickening and mucus plugs may serve as biomarkers for inflammation and are associated with clinical characteristics such as spirometry, blood eosinophil counts and disease severity in patients with bronchiectasis and asthma co-diagnosis.

Methods: In a cross-sectional retrospective cohort of 64 patients with bronchiectasis disease and asthma, we applied automated image analysis to assess bronchial dimensions and mucus plug metrics on chest CT scans. These metrics were correlated with spirometry, blood eosinophil counts as well as FACED and Bronchiectasis Severity Index (BSI) scores using correlations and multiple regression analyses.

Results: In 63 patients, bronchial wall thickness and mucus plugs were quantified. Negative correlations were observed between bronchial wall thickness markers and spirometry (bronchial wall thickness/accompanying artery diameter and forced expiratory volume in 1 s (FEV₁), $r = -0.37$; FEV₁/forced vital capacity, $r = -0.30$). Mucus plugs correlated negatively with spirometry and positively with FACED and BSI scores (number of mucus plugs and BSI, $r = 0.45$). Correlations with blood eosinophil counts were very weak. In multiple regression analyses, independent associations were observed for FEV₁, *Pseudomonas aeruginosa* and frequent exacerbations.

Conclusion: This study identified key relationships between automated measurements of bronchial wall thickness and mucus plugs and clinical characteristics, highlighting their potential as imaging biomarkers to enhance phenotyping, improve risk assessment and facilitate tailored treatment strategies in bronchiectasis.

Copyright ©The authors 2025.

Conflict of interest statement

Conflict of interest: T. van der Veer reports no conflicts of interest involving the work under consideration for publication, no relevant financial activities outside the submitted work and no other relationships or activities that readers could perceive to have influenced, or that give the appearance of potentially influencing, the current manuscript. E-R. Andrinopoulou reports no conflicts of interest and no relevant financial activities or other relevant relationships or activities regarding the work under consideration. P. Makani reports no conflicts of interest and no relevant financial

activities or other relevant relationships or activities regarding the work under consideration. G-J. Braunstahl reports honoraria for lectures and consultancy from GSK, AstraZeneca, Novartis and Sanofi Genzyme, as well as research grants from Sanofi Genzyme, GSK and AstraZeneca, not related to the work under consideration. H.A.W.M. Tiddens received, in the last 3 years, multiple grants from the following public and institutional grant institutions for lung structure and function research: NHMRC, NIH, CFF, ECFS, IMI and Erasmus MC Sophia Foundation; received unconditional grants for investigator-initiated research from Novartis and Insmed; acted as a consultant for Insmed, Thirona, Neupharma and Boehringer Ingelheim; and has been chief medical officer for Thirona since April 2022, and vice-chair and faculty for the ADVANCE course sponsored by Vertex.

- [40 references](#)
- [4 figures](#)

Full text links

[Proceed to details](#)

Cite

15

ERJ Open Res

-
-
-

. 2025 Aug 4;11(4):01139-2024.

doi: 10.1183/23120541.01139-2024. eCollection 2025 Jul.

[Infant respiratory outcomes following asthma management and exacerbations in pregnancy](#)

[Bronwyn K Brew](#)¹², [Peter G Gibson](#)¹²³, [Adam M Collison](#)¹², [Joerg Mattes](#)¹²⁴, [Gabriela Martins Costa Gomes](#)¹², [Annelies Robijn](#)¹²⁵, [Megan E Jensen](#)¹², [Wilfried Karmaus](#)⁶, [Paul Robinson](#)⁷⁸, [Michael J Peek](#)⁹, [Sean Seeho](#)¹⁰, [Peter D Sly](#)⁷, [Vanessa E Murphy](#)¹²

Affiliations Expand

- PMID: 40761652
- PMCID: [PMC12320104](#)

- DOI: [10.1183/23120541.01139-2024](https://doi.org/10.1183/23120541.01139-2024)

Abstract

Background: Improved maternal asthma management in pregnancy may reduce recurrent bronchiolitis and wheeze outcomes in infancy. We assessed whether infant bronchiolitis and wheeze outcomes are influenced by inflammation-guided management intervention, inhaled corticosteroid (ICS) use or exacerbations in pregnancy.

Methods: A randomised controlled trial (RCT) secondary analysis and observational cohort analysis using the same study population was carried out. Pregnant women (12-23 weeks' gestation) from six centres in Australia were recruited and randomised to inflammation-guided asthma management or usual care between 2013 and 2023. ICS use and asthma exacerbations were reported during pregnancy and postnatally. When infants were 6 (n=691) and 12 (n=606) months of age, respiratory information was collected from parents and medical records. Associations for the RCT and observational analyses were assessed with logistic regression.

Results: Guided asthma management in pregnancy was not associated with bronchiolitis or wheeze-related outcomes, for example for recurrent bronchiolitis at 12 months, the intervention OR was 1.04 (95% CI 0.62-1.73). In the observational analyses, ICS use in pregnancy was not associated with respiratory outcomes; however, asthma exacerbations in pregnancy were associated with at least one bronchiolitis episode (adjusted odds ratio (adjOR) 2.20, 95% CI 1.28-3.76) or croup episode (adjOR 4.34, 95% CI 1.89-9.96) at 6 months, and wheeze (adjOR 1.80, 95% CI 1.14-2.84) and increasing wheeze episodes at 12 months (adjOR 1.81, 95% CI 1.17-2.79).

Conclusion: Although there was no evidence that guided asthma management or ICS use in pregnancy reduces infant bronchiolitis or wheeze, maternal asthma exacerbations are an important risk factor for these outcomes. Further research is needed to reduce exacerbations in pregnancy.

Copyright ©The authors 2025.

Conflict of interest statement

Conflict of interest: P.G. Gibson reports speaker's payments for educational activities from AstraZeneca, GlaxoSmithKline and Novartis. All other authors report no conflicts of interest.

- [38 references](#)
- [3 figures](#)

Full text links

[Proceed to details](#)

Cite

ERJ Open Res

-
-
-

. 2025 Aug 4;11(4):01217-2024.

doi: 10.1183/23120541.01217-2024. eCollection 2025 Jul.

[Real-world comparative effectiveness of biologic therapies in severe asthma: EU-ADVANTAGE](#)

[Giorgio Walter Canonica](#)¹, [Johann Christian Virchow](#)², [Arnaud Bourdin](#)³, [Juby Jacob-Nara](#)⁴, [Kinga Borsos](#)⁵, [Richard H Stanford](#)⁶, [Zhixiao Wang](#)⁷, [Mena Soliman](#)⁷, [Lynn Huynh](#)⁸, [Fariha Haque](#)⁸, [Mei Sheng Duh](#)⁸, [Wei-Han Cheng](#)⁵

Affiliations Expand

- PMID: 40761646
- PMCID: [PMC12320101](#)
- DOI: [10.1183/23120541.01217-2024](#)

Abstract

Background: In Europe, although multiple biologics have been approved for the treatment of severe asthma (SA), comparative data from real-world settings remain limited. This study compared the real-world effectiveness of dupilumab with that of omalizumab, benralizumab and mepolizumab in European patients with SA.

Methods: In the EU-ADVANTAGE study, physicians from France, Italy, Germany, Spain and the Netherlands were recruited to review medical charts of patients (aged ≥ 12 years) who had physician-confirmed SA and initiated dupilumab, omalizumab, benralizumab or mepolizumab (index) between May 2019 and February 2022. Patients with ≥ 12 months of pre- and post-index records were included. Differences in baseline covariates were balanced with inverse probability of treatment weighting (IPTW) between dupilumab and other biologics. Reductions in SA exacerbations and oral corticosteroid (OCS) prescriptions during the 12-month post-index period were estimated using a doubly robust regression.

Results: A total of 2739 patients met all study criteria; 1281, 638, 406 and 414 received dupilumab, omalizumab, benralizumab and mepolizumab, respectively. After IPTW, the majority of baseline covariates were balanced (standardised difference $< 10\%$) between dupilumab and other biologics in a pairwise manner. After regression, dupilumab was

associated with a lower risk of SA exacerbations during the 12-month post-index period, as follows: 22% *versus* omalizumab, 35% *versus* benralizumab and 23% *versus* mepolizumab. Additionally, dupilumab significantly reduced OCS prescriptions by 25% *versus* omalizumab, 27% *versus* benralizumab and 21% *versus* mepolizumab.

Conclusions: The findings suggest that dupilumab may reduce severe exacerbations and OCS use in patients with SA better than omalizumab, benralizumab and mepolizumab in European real-world settings.

Copyright ©The authors 2025.

Conflict of interest statement

Conflict of interest: G.W. Canonica reports research grants from A. Menarini, AstraZeneca, GSK, Hal Allergy, Sanofi-Aventis, Sanofi-Genzyme and Stallergenes Greer; and lecture or advisory board fees from A. Menarini, Allergy Therapeutics, AstraZeneca, Celltrion, Chiesi, Faes, Firma, Genentech, GSK, Hal Allergy, Innovacaremd, Novartis, OM Pharma, RedMaple, Sanofi-Aventis, Sanofi-Genzyme, Stallergenes Greer and Uriach Pharma. J.C. Virchow reports research grants from Deutsche Forschungsgemeinschaft, Land Mecklenburg-Vorpommern, GSK and MSD; advisory committee membership for Avontec, Boehringer Ingelheim, Cypla, Chiesi, Essex/Schering-Plough, Genzyme, GSK, Janssen-Cilag, MEDA, MSD, Mundipharma, Novartis, Regeneron, Revotar, Roche, Sanofi-Aventis, Sandoz-Hexal, TEVA and UCB/Schwarz-Pharma; and lecture honoraria from AstraZeneca, Avontec, Bayer, Bencard, Bionorica, Boehringer Ingelheim, Chiesi, Cypla, German Remedies, Essex/Schering-Plough, Genzyme, GSK, Janssen-Cilag, Leti, MEDA, Merck, MSD, Mundipharma, Noramed, Novartis, Nycomed/Altana, Pfizer, Providens, Regeneron, Revotar, Sandoz-Hexal, Sanofi-Aventis, Stallergenes Greer, TEVA, UCB/Schwarz-Pharma and Zydus/Cadila. A. Bourdin reports research grants and consulting fees from AstraZeneca-MedImmune, Boehringer Ingelheim, Cephalon/Teva, GSK, Novartis and Sanofi-Regeneron; consultancy for Med-in-Cell, Actelion, Merck, Roche and Chiesi; and work as an investigator or coinvestigator for AstraZeneca-MedImmune, Boehringer Ingelheim, GSK, Novartis, Sanofi/Regeneron, Chiesi, Actelion, Merck, Roche, Vertex and Galapagos. J. Jacob-Nara, K. Borsos and W-H. Cheng are former Sanofi employees. R.H. Stanford is an Aesara employee and a paid consultant to Sanofi. Z. Wang and M. Soliman are Regeneron Pharmaceuticals, Inc. employees, and may hold stocks and/or stock options in the company. L. Huynh, F. Haque and M.S. Duh are Analysis Group employees; Analysis Group, Inc. received research funds from Sanofi to conduct this study.

- [27 references](#)
- [3 figures](#)

Full text links

[Proceed to details](#)

Cite

17

Review

Expert Rev Respir Med

-
-
-

. 2025 Aug 5:1-11.

doi: [10.1080/17476348.2025.2535182](https://doi.org/10.1080/17476348.2025.2535182). Online ahead of print.

[The use of biologic therapies in pediatric severe asthma](#)

[Cristiana Indolfi](#)¹, [Angela Klain](#)¹, [Michele Miraglia Del Giudice](#)¹, [Maria De Filippo](#)^{2,3}, [Alessia Marseglia](#)⁴, [Gian Luigi Marseglia](#)^{2,4}, [Amelia Licari](#)^{2,4}

Affiliations Expand

- PMID: 40760950
- DOI: [10.1080/17476348.2025.2535182](https://doi.org/10.1080/17476348.2025.2535182)

Abstract

Introduction: Severe asthma in children is a chronic, heterogeneous condition that significantly impacts quality of life and poses management challenges. The introduction of biological therapies has transformed treatment paradigms, offering targeted interventions for patients with specific phenotypes.

Areas covered: This review provides an overview of the current evidence on biologic therapies approved for pediatric severe asthma, including omalizumab, mepolizumab, benralizumab, and dupilumab. We discuss their mechanisms of action, pivotal clinical trials, real-world data, and practical considerations for use. A comprehensive literature search was performed using PubMed, Embase, and major conference proceedings up to May 2025. We also examine emerging biologic agents targeting upstream pathways, such as tezepelumab and anti-IL-33 therapies, and explore the concept of asthma remission and its implications for long-term disease trajectories.

Expert opinion: Biologics represent a significant advancement in pediatric asthma management, enabling for tailored treatments based on underlying pathophysiology. However, challenges persist in optimizing patient selection, enhancing access, and comprehending long-term outcomes. Future research should focus on early intervention

strategies, cost-effectiveness analyses, and the potential for disease-modifying effects in children.

Keywords: Severe asthma; biological products/therapeutic use; biomarkers/blood; pediatrics; precision medicine.

Supplementary info

Publication types [Expand](#)

Full text links

[Proceed to details](#)

Cite

18

Pulm Ther

-
-
-

. 2025 Aug 4.

doi: [10.1007/s41030-025-00310-5](https://doi.org/10.1007/s41030-025-00310-5). Online ahead of print.

[Real-World Use of MART in Moderate-Severe Asthma: Results from the Italian WAMP Survey among Healthcare Professionals and Patients](#)

[Fulvio Braido](#)¹², [Matteo Bonini](#)³⁴, [Walter Castellani](#)⁵, [Andrea Claudio Comel](#)⁶, [Francesco Paolo Lombardo](#)⁷, [Antonio Spanevello](#)⁸⁹, [Alessandro Vatrella](#)¹⁰, [Marco Contoli](#)¹¹¹²

Affiliations [Expand](#)

- PMID: 40760303
- DOI: [10.1007/s41030-025-00310-5](https://doi.org/10.1007/s41030-025-00310-5)

Free article

Abstract

Introduction: Moderate-severe asthma affects a significant proportion of patients and poses challenges in symptom control and exacerbation prevention. The preferred track 1 endorsed by the Global Initiative for Asthma (GINA) recommendations offers a single-inhaler approach combining inhaled corticosteroids and formoterol for both maintenance and symptom relief (maintenance and reliever therapy; MART). However, MART's real-world adoption remains suboptimal and concerns regarding its correct

implementation persist. "What About MART Posology" (WAMP) survey assessed the knowledge and clinical application of MART among Italian healthcare professionals (HCPs) and patients.

Methods: WAMP was a cross-sectional, web-based survey conducted among 1000 Italian HCPs and 400 patients with moderate-severe asthma. HCPs answered questions regarding treatment preferences, adherence to GINA recommendations and MART implementation. Patients reported on their therapeutic regimens, inhaler use, and adherence behaviors.

Results: Most HCPs demonstrated awareness of GINA recommendations.

Pulmonologists (73.6%) and allergists (62.0%) reported favoring track 1, while general practitioners (GPs) showed greater variability (55.1%). Most of HCPs reported the use of inhaled corticosteroids (ICS)-formoterol, according to the MART approach, to manage moderate-severe asthma. GPs reported that approximately 45.5% of moderate-severe patients with asthma treated with ICS-formoterol inhaled therapy were also prescribed short-acting β 2-agonists (SABA). Among patients, ICS-formoterol was the most reported regimen (59.7%), despite only 21.6% adhered to the MART approach correctly. Triple therapy was preferred for patients with recurrent exacerbations, yet its adoption was lower than expected.

Conclusions: The WAMP survey suggests a strong awareness of GINA track 1 among Italian HCPs. MART was widely implemented, particularly by specialists; patient data supported these findings. Gaps in education on MART's dual function persist though. Targeted training for HCPs and improved patient education are essential to optimize asthma management and adherence to evidence-based strategies.

Keywords: Asthma; Healthcare professional; Inhaled therapy; Italy; Maintenance and reliever therapy (MART); Moderate; Patient; Severe; Survey.

© 2025. The Author(s).

Conflict of interest statement

Declarations. Conflict of Interest: Matteo Bonini has received research grants, advisory board honoraria, consultancy fees, and lecture fees from AstraZeneca, Chiesi Farmaceutici, Grifols, GlaxoSmithKline, Lallemand Health Solutions, Lusofarmaco, Menarini Group, Omron Healthcare, and Sanofi. Francesco Paolo Lombardo has received consultancy and lecture fees from Chiesi Farmaceutici, GlaxoSmithKline, and AstraZeneca. Walter Castellani, Marco Contoli, Andrea Claudio Comel, Fulvio Braidò, Antonio Spanevello, and Alessandro Vatrella have nothing to disclose. **Ethics Approval:** The survey was conducted in accordance with the principles outlined in the Declaration of Helsinki, and informed consent was obtained from patients prior to their involvement. Ethics approval was not required for this study as it was based on a voluntary, anonymous survey of healthcare professionals and patients, without the collection of sensitive personal data or interventions affecting patient care, in accordance with applicable ethical guidelines and regulations.

- [32 references](#)

Full text links

[Proceed to details](#)

Cite

19

Respir Med

-
-
-

. 2025 Aug 4:247:108293.

doi: [10.1016/j.rmed.2025.108293](https://doi.org/10.1016/j.rmed.2025.108293). Online ahead of print.

[Efficacy and safety of novel fixed dose combination of vilanterol, glycopyrronium, and fluticasone furoate dry powder inhaler: A phase 3, randomized, non-inferiority trial compared with fixed dose combination of indacaterol, glycopyrronium, and mometasone furoate dry powder inhaler in Indian asthma patients](#)

[Chintan Patel¹](#), [Vaishal Sheth²](#), [Ravi Koppula³](#), [Avadhesh Kumar⁴](#), [Amit S Bhate⁵](#), [Diptikant Sahoo⁶](#), [Manish Kumar Jain⁷](#), [Asish Mondal⁸](#), [Deven Parmar⁹](#), [Kevinkumar Kansagra⁹](#), [Rahul Shrivastava⁹](#), [Hardik Pathak¹⁰](#)

Affiliations Expand

- PMID: 40759266
- DOI: [10.1016/j.rmed.2025.108293](https://doi.org/10.1016/j.rmed.2025.108293)

Abstract

Background: For managing persistent asthma, M/s. Zydus Healthcare Limited has developed a novel fixed dose combination (FDC) of vilanterol 25 µg, glycopyrronium 50 µg, and fluticasone furoate 200 µg (VIL-GLY-FF) in dry powder inhaler (DPI) formulation.

Methods: This phase 3, multicenter, parallel group, open-label study randomized (1:1) patients not controlled with medium or high-dose inhaled corticosteroid in either the test (VIL-GLY-FF DPI) or reference (approved FDC DPI of indacaterol 150 µg, GLY 50 µg, and mometasone furoate 160 µg [IND-GLY-MF]) group. FDCs were administered by inhaling one capsule via Respihaler device once-daily for 12 weeks. The primary endpoint was the change in trough forced expiratory volume in 1 s (FEV1) at week 12 from baseline. Secondary outcomes included the comparison of trough forced vital capacity

(FVC), post-bronchodilator FEV1 and FVC, and asthma control test score between the two groups.

Findings: All 256 enrolled patients completed the study. The least square mean (standard error) change in trough FEV1 at week 12 from baseline was 392.77 (31.33) ml and 364.34 (31.33) ml for the test and reference groups ($p = 0.522$), respectively. The lower limit of 95 % confidence interval for the difference between two groups for the mean change in trough FEV1 at week 12 from baseline was -58.83 ml, well-above the predefined non-inferiority margin (-150 ml). Other secondary endpoints and safety were comparable between the two groups.

Interpretation: VIL-GLY-FF DPI was found non-inferior to IND-GLY-MF DPI in improving trough FEV1 response. The test FDC was well-tolerated in Indian patients with persistent asthma.

Clinical trial registration number: CTRI/2024/02/063046 (Clinical Trial Registry - India).

Keywords: Asthma; Fluticasone furoate; Glycopyrronium; Non-inferiority; Phase 3; Randomized; Vilanterol; dry powder inhaler.

Copyright © 2025 Elsevier Ltd. All rights reserved.

Conflict of interest statement

Declaration of competing interest The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: Kevinkumar Kansagra, Deven Parmar, Rahul Shrivastava, and Hardik Pathak are employees of Zydus Lifesciences Ltd., Ahmedabad, India. All other authors have no conflict of interests to declare. If there are other authors, they declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Full text links

[Proceed to details](#)

Cite

20

Allergy

-
-
-

. 2025 Aug 4.

doi: 10.1111/all.16685. Online ahead of print.

"Clinical and Biological Remission With Tezepelumab: The Real-World Response in Severe Uncontrolled Asthma"

C Mümmler^{1,2}, K Milger^{1,3}

Affiliations Expand

- PMID: 40757672
- DOI: [10.1111/all.16685](https://doi.org/10.1111/all.16685)

No abstract available

Keywords: allergy treatment; asthma; biologics.

Supplementary info

Publication typesExpand

Full text links

[Proceed to details](#)

Cite

21

Postgrad Med J

-
-
-

. 2025 Aug 4;qgaf121.

doi: [10.1093/postmj/qgaf121](https://doi.org/10.1093/postmj/qgaf121). Online ahead of print.

[The impact of inhaler on the environment and climate change: past, present, and future](#)

[Elizabeth Man Chin Ng¹, Wang Chun Kwok²](#)

Affiliations Expand

- PMID: 40755152
- DOI: [10.1093/postmj/qgaf121](https://doi.org/10.1093/postmj/qgaf121)

No abstract available

Keywords: asthma; chronic airways disease; thoracic medicine; thoracic medicine; respiratory medicine.

Full text links

[Proceed to details](#)

Cite

22

Clin Otolaryngol

-
-
-

. 2025 Aug 3.

doi: 10.1111/coa.70009. Online ahead of print.

[Complications and Economic Burden of Surgery in Chronic Rhinosinusitis With Nasal Polyps: An Observational Cohort Study Using Swedish Register Data](#)

[Petter Olsson](#)¹, [Christoph Abé](#)^{2,3}, [Maija Wolf](#)⁴, [Mathias Lilja](#)², [Tina Maio-Twofoot](#)⁵, [Ola Sunnergren](#)^{6,7}, [Pernilla Sahlstrand-Johnson](#)⁸

Affiliations Expand

- PMID: 40754756
- DOI: [10.1111/coa.70009](#)

Abstract

Introduction: There is a lack of comprehensive data on complications following sinus surgery (SS) in patients with chronic rhinosinusitis with nasal polyps (CRSwNP). This study aimed to estimate the prevalence of SS-related complications in CRSwNP patients and examine patient characteristics, predictors of revision surgery, healthcare use, and associated costs using secondary care data from Swedish registers.

Methods: This observational cohort study used Swedish administrative register data to report patient characteristics and estimate the prevalence and incidence of SS-related complications among CRSwNP patients. Healthcare resource use (HCRU) and associated costs, the probability of and predictors for revision surgery were assessed.

Results: Out of 9178 CRSwNP patients who underwent SS, 8.5% experienced complications to SS. Asthma was the most frequently observed comorbidity. The probability of revision surgery within 4 years was 12%. Factors such as younger age at

index, complications to first surgery, earlier index year, and comorbid asthma were significant predictors for future surgery. Within 4 years of follow-up, patients undergoing SS showed more HCRU and higher related costs compared to matched general population controls (€13 865 vs. €7088 per person; $p < 0.001$). Asthma comorbidity, the occurrence of complications, and undergone revision surgery were associated with higher costs.

Conclusion: Overall, this study provides valuable clinical insights into patient characteristics, complications to SS, resource use, and factors related to revision surgery in patients with CRSwNP.

Keywords: asthma; chronic rhinosinusitis; nasal polyps; sinus surgery.

© 2025 The Author(s). Clinical Otolaryngology published by John Wiley & Sons Ltd.

- [25 references](#)

Supplementary info

Grants and fundingExpand

Full text links

[Proceed to details](#)

Cite

23

Occup Environ Med

-
-
-

. 2025 Aug 3;oemed-2025-110161.

doi: 10.1136/oemed-2025-110161. Online ahead of print.

[Respiratory symptoms, airflow obstruction and asthma in a cohort of workers from the stone benchtop industry](#)

[Dunya Tomic](#)¹, [Ryan F Hoy](#)^{2,3}, [Michael J Abramson](#)^{3,4}, [Deborah C Glass](#)², [Hayley Barnes](#)^{2,3}, [Mehdi Alamdari](#)⁵, [Malcolm Ross Sim](#)², [Karen Walker-Bone](#)^{2,6}

Affiliations Expand

- PMID: 40754368
- DOI: [10.1136/oemed-2025-110161](https://doi.org/10.1136/oemed-2025-110161)

Abstract

Objectives: Compared with silicosis, there has been less research on other respiratory diseases in stone benchtop industry workers. Therefore, we explored respiratory symptoms, airflow obstruction and asthma, including associations with workplace dust exposure, in these workers.

Methods: This study included voluntary participants from a stone benchtop industry screening programme conducted in Victoria, Australia, which included chest X-rays, respiratory function tests and a respiratory symptom questionnaire. Asthma status was determined based on self-report, and respiratory function tests were used to measure airflow obstruction. The associations between workplace dust exposure and respiratory symptoms were compared using logistic regression, adjusting for age, smoking status and silicosis.

Results: The prevalence of self-reported asthma in this cohort was 20% (90/450 workers). Workers with histories of high workplace dust exposure, even those without silicosis, were more likely to have self-reported asthma and to report respiratory symptoms. Those with obstruction but no bronchodilator response on respiratory function tests were more likely to report histories of high workplace dust exposure. For over half of workers with wheeze or difficulty breathing, symptoms improved at weekends and/or on holidays.

Conclusions: There was a high prevalence of self-reported asthma in stone benchtop industry workers and an association between workplace dust exposure and airflow obstruction without bronchodilator response, as well as self-reported asthma, independent of silicosis. These findings suggest a potential role of artificial stone dust exposure in the development of obstructive lung disease, in addition to silicosis.

Keywords: Asthma; Occupational Health; Public Health Surveillance; Silicosis.

© Author(s) (or their employer(s)) 2025. No commercial re-use. See rights and permissions. Published by BMJ Group.

Conflict of interest statement

Competing interests: MJA holds investigator-initiated grants for unrelated research from Pfizer, Boehringer-Ingelheim, GlaxoSmithKline and Sanofi. He has undertaken an unrelated consultancy for Sanofi and received a speaker's fee from GlaxoSmithKline. Other authors have no competing interests to declare.

Full text links

[Proceed to details](#)

Cite

24

JCI Insight

-
-
-

. 2025 Jun 24;10(15):e193640.

doi: 10.1172/jci.insight.193640. eCollection 2025 Aug 8.

[HSP70 is a chaperone for IL-33 activity in chronic airway disease](#)

[Omar A Osorio](#)¹, [Heather E Raphael](#)¹, [Colin E Kluender](#)¹, [Ghandi F Hassan](#)¹, [Lucy S Cohen](#)¹, [Deborah F Steinberg](#)¹, [Ella Katz-Kiriakos](#)¹, [Morgan D Payne](#)¹, [Ethan M Luo](#)¹, [Jamie L Hicks](#)¹, [Derek E Byers](#)¹, [Jennifer Alexander-Brett](#)^{1,2}

Affiliations Expand

- PMID: 40553562
- PMCID: [PMC12333954](#)
- DOI: [10.1172/jci.insight.193640](#)

Abstract

IL-33 is a key driver of type 2 inflammation and implicated in pathology of chronic obstructive pulmonary disease (COPD) and asthma. However, the mechanism for IL-33 secretion and regulation in the context of chronic airway disease is poorly understood. We previously reported an airway disease-associated isoform IL-33 Δ 34 that escapes nuclear sequestration and is tonically secreted from epithelial cells. Here, we describe how this IL-33 Δ 34 isoform interacts with HSP70 within cells and is targeted to secretory organelles through coordinated binding to phosphatidylserine (PS) and delivered to compartments for unconventional protein secretion (CUPS). Once secreted, extracellular HSP70 (eHSP70) in complex with IL-33 Δ 34 stabilizes the cytokine by inhibiting oxidation and degradation, which results in enhanced IL-33 Δ 34-receptor binding and activity. We further find evidence that IL-33 along with mediators of the proteostasis network HSP70, HSP90, and the Chaperonin Containing TCP1 (CCT) complex are dysregulated in human chronic airway disease. This phenomenon is reflected in the differential extracellular vesicle (EV) proteome in bronchial wash from COPD and asthma samples, which could mark disease activity and potentiate IL-33 function. This study confirms proteostasis intermediates, chiefly HSP70, as chaperones for noncanonical IL-33 secretion and activity that may be amenable for therapeutic targeting in the chronic airway diseases COPD and asthma.

Keywords: COPD; Chaperones; Cytokines; Immunology; Pulmonology.

Conflict of interest statement

Conflict of interest: JAB is a site principal investigator for the Astra Zeneca TILIA clinical trial.

- [83 references](#)
- [6 figures](#)

"rhinitis"[MeSH Terms] OR rhinitis[Text Word]

1

Eur Arch Otorhinolaryngol

-
-
-

. 2025 Aug 9.

doi: [10.1007/s00405-025-09529-z](https://doi.org/10.1007/s00405-025-09529-z). Online ahead of print.

[Long-term clinical control in chronic rhinosinusitis: Outcomes more than five years after surgery](#)

[Gonneke E Joustra¹²](#), [Marc C den Heijer^{3,4}](#), [Rahma Q H Al Yousef³](#), [Karin M Vermeulen⁵](#), [György B Halmos³](#), [Astrid G W Korsten-Meijer³](#), [Robert A Feijen³](#)

Affiliations Expand

- PMID: 40782154
- DOI: [10.1007/s00405-025-09529-z](https://doi.org/10.1007/s00405-025-09529-z)

Abstract

Purpose: Chronic rhinosinusitis (CRS) is a common chronic and disabling disease with a high socioeconomic burden. The primary goal of treatment is improving health-related quality of life (HRQoL) and maintaining clinical control. The aim of this study was to assess clinical control in CRS patients more than 5 years after endoscopic endonasal surgery (EES).

Methods: In this observational cohort study, 123 patients with CRS were included and they completed the Endoscopic Endonasal Sinus and Skull Base Surgery Questionnaire and updated European Position Paper on Rhinosinusitis and Nasal Polyps (EPOS) criteria. Three clinical control groups were obtained according to the EPOS criteria and corresponding EES-Q and domain scores were analyzed. Univariate analyses were performed to identify variables significantly associated with outcome.

Results: Symptoms of 25.2% of CRS patients were 'controlled', 26.8% were 'partly controlled' and 48.0% were 'uncontrolled' according to the EPOS criteria. Nonsteroidal anti-inflammatory drug - exacerbated respiratory disease, allergic rhinitis, revision surgery, smoking, asthma, and nasal polyps were all significantly associated with partly controlled or uncontrolled CRS. The physical domain played the most significant role in disease control, followed by the social and psychological domain.

Conclusion: According to the updated EPOS criteria, only 25% of patients had controlled CRS more than five years following EES. This emphasizes the importance of unravelling the factors that contribute to disease control to improve treatment. The multidimensional aspect should be taken into account as well as the patients' perspective.

Level of evidence: IIB.

Keywords: Chronic rhinosinusitis; Clinical control; Disease control; EES-Q; Patient-reported outcome measure; Quality of life.

© 2025. The Author(s).

- [28 references](#)

Full text links

[Proceed to details](#)

Cite

2

Review

J Allergy Clin Immunol Pract

-
-
-

. 2025 Aug 6:S2213-2198(25)00764-0.

doi: 10.1016/j.jaip.2025.07.052. Online ahead of print.

[Sleep Disorders in the Allergy-Immunology Clinic](#)

[Alexandra E Conway](#)¹, [Marylee Verdi](#)², [Aikaterini Anagnostou](#)³, [Jonathan Bernstein](#)⁴, [Elissa M Abrams](#)⁵, [Juliette Madan](#)⁶, [John Oppenheimer](#)⁷, [David M Lang](#)⁸, [Matthew Hand](#)⁹, [Joseph P Forester](#)¹⁰, [Sean Moynihan](#)¹¹, [Nofar Kimchi](#)¹², [Marcus S Shaker](#)¹³

Affiliations Expand

- PMID: 40780379
- DOI: [10.1016/j.jaip.2025.07.052](https://doi.org/10.1016/j.jaip.2025.07.052)

Abstract

The immunologic consequences of disordered sleep are evident in many disease states, including multiple allergic diseases and disorders cared for in the allergy immunology clinic. Allergic rhinitis is significantly associated with disordered sleep, most commonly obstructive sleep apnea (OSA) which worsens the allergic process itself through chronic intermittent hypoxia and increased inflammatory activation. Patients with asthma also commonly suffer from OSA, with both conditions worsening nighttime airway resistance. Disrupted sleep decreases the reaction threshold for patients with anaphylaxis. In considering allergic-immunologic diseases and disorders of sleep, it is important to recognize that treatments for one condition may benefit the other and these may include topical glucocorticosteroid use, surgery, and continuous positive airway pressure. Addressing both issues - the allergic-immunologic disease and the sleep disorder - may be critical not only to the patient's physical health but to their mental health as well, particularly anxiety and depression. Recognizing and treating disordered sleep as a component of allergic disease symptom management has the potential to improve allergy outcomes, mental health outcomes, and overall wellbeing.

Keywords: Sleep; allergic rhinitis; allergy; anaphylaxis; asthma.

Copyright © 2025. Published by Elsevier Inc.

Supplementary info

Publication typesExpand

Full text links

[Proceed to details](#)

Cite

3

Meta-Analysis

BMC Pediatr

-
-

•
. 2025 Aug 7;25(1):611.

doi: [10.1186/s12887-025-05906-z](https://doi.org/10.1186/s12887-025-05906-z).

[Risk factors for allergic rhinitis in preschool children: a meta-analysis and systematic review](#)

[Nannan Si](#)^{1,2,3}, [Wei Chang](#)², [Fengli Cheng](#)^{1,3}, [Yanjie Wang](#)^{1,3}, [Limin Suo](#)^{1,3}, [Changqing Zhao](#)^{4,5}

Affiliations Expand

- PMID: 40775314
- PMCID: [PMC12333309](#)
- DOI: [10.1186/s12887-025-05906-z](https://doi.org/10.1186/s12887-025-05906-z)

Abstract

Background: Allergic rhinitis (AR) is a common disease in preschool children and seriously affects their quality of life. Defining the risk factors of AR can help early diagnosis and prevention. The aim of this meta-analysis was to identify and summarize the risk factors associated with allergic rhinitis in preschool children.

Methods: A systematic search of PubMed, Embase, Cochrane library, Web of Science, built up to 20 January 2025 was performed. Studies were included if they reported risk factors for AR in preschool children. A random-effects model was used to calculate the combined odd ratio (OR) and 95% confidence interval (CI).

Results: A total of 10 cohort studies involving 94,774 preschool children were included in this meta-analysis. The results suggested that several factors may be associated with higher odds of allergic rhinitis in preschool children. These factors include parental allergic rhinitis (OR = 2.4, 95% CI: 2.01-2.87), parental eczema (OR = 1.72, 95% CI: 1.48-1.99), parental asthma (OR = 2.45, 95% CI: 1.53-3.93), male (OR = 1.54, 95% CI: 1.37-1.72), caesarean birth (OR = 1.32, 95% CI: 1.08-1.61), and dampness at home (OR = 1.24, 95% CI: 1.08-1.42). On the other hand, the presence of pets at home was found to be protective, with a reduced risk of allergic rhinitis (OR = 0.57, 95% CI: 0.41-0.78).

Conclusion: This study suggests that factors such as parental history of allergy, boys, caesarean section and damp environment at home may increase the risk of allergic rhinitis in preschool children, whereas pets may have a protective role. These findings emphasize the influence of genetic and environmental factors on allergic rhinitis in children.

Keywords: Allergic rhinitis; Meta-analysis; Preschool children; Risk factors.

© 2025. The Author(s).

Conflict of interest statement

Declarations. Ethics approval and consent to participate: Not applicable. Consent for publication: Not applicable. Competing interests: The authors declare no competing interests.

- [46 references](#)
- [8 figures](#)

Supplementary info

Publication types, MeSH terms, Grants and fundingExpand

Full text links

[Proceed to details](#)

Cite

4

Am J Rhinol Allergy

-
-
-

. 2025 Aug 4:19458924251360889.

doi: [10.1177/19458924251360889](https://doi.org/10.1177/19458924251360889). Online ahead of print.

[Three-Year Outcomes After Temperature-Controlled Radiofrequency Ablation of the Posterior Nasal Nerve for Chronic Rhinitis](#)

[Jivianne T Lee](#)¹, [Gregory M Abbas](#)², [Daniel D Charous](#)³, [Mandy Cuevas](#)⁴, [Önder Göktas](#)⁵, [Patricia A Loftus](#)⁶, [Nathan E Nachlas](#)⁷, [Elina M Toskala](#)⁸, [Jeremy P Watkins](#)⁹, [Detlef Brehmer](#)^{10 11 12}

Affiliations Expand

- PMID: 40760831
- DOI: [10.1177/19458924251360889](https://doi.org/10.1177/19458924251360889)

Free article

Abstract

BackgroundChronic rhinitis (CR) is characterized by refractory symptoms such as rhinorrhea, sneezing, nasal congestion, postnasal drip (PND), and cough. Most patients do not achieve lasting symptom relief with medical management.**Objective**To evaluate the long-term efficacy and safety of temperature-controlled radiofrequency treatment targeting posterior nasal nerves (PNNs) for CR.**Methods**This prospective, single-arm, open-label, multicenter study included patients aged 18-85 years across 19 centers in the United States and Germany. Outcome measures included reflective Total Nasal Symptom Score (rTNSS), PND and cough scores, and the Mini Rhinoconjunctivitis Quality of Life Questionnaire (MiniRQLQ). Outcomes, including adverse events, were reported through 3 years post-procedure.**Setting**All procedures were performed in an outpatient office-based setting.**Results**One hundred twenty-nine patients received treatment; 101 completed 3-year follow-up. The adjusted mean rTNSS Score improved from 7.8 (95% confidence interval [CI]: 7.5-8.1) at baseline to 3.2 (95% CI: 2.8-3.7) at 3 years (mean change: -4.5 [95% CI: -5.1 to -4.0]; $P < .001$). Rhinorrhea symptom scores improved from 2.6 to 1.2 (55.8% reduction). Compared to baseline, at 3 years, adjusted mean cough and PND scores declined from 1.3 to 0.4 (mean change: -0.9; $P < .001$, 69% reduction) and from 2.4 to 1.2 (mean change: -1.2; $P < .001$, 50% reduction), respectively. MiniRQLQ scores were significantly reduced from an adjusted mean of 3.0 (95% CI: 2.8-3.2) at baseline to 1.2 (95% CI: 1.0-1.4) at 3-year follow-up; $P < .001$. No serious device- or procedure-related adverse events were reported.**Conclusion**A single temperature-controlled radiofrequency treatment of the PNN safely and effectively reduced CR symptoms, including cough and PND, improved quality of life, and decreased medication burden through a period of 3 years with no serious adverse events.

Keywords: ablation; allergic rhinitis; chronic rhinitis; congestion; neurolysis; posterior nasal nerve; postnasal drip; rTNSS; temperature-controlled radiofrequency; vasomotor rhinitis.

Full text links

[Proceed to details](#)

Cite

5

Int Arch Allergy Immunol

-
-
-

. 2025 Aug 4:1-13.

doi: 10.1159/000547718. Online ahead of print.

[Causal association of 91 circulating inflammatory proteins with allergic rhinitis: a Mendelian randomisation study](#)

[Hui Zhang, Yuefeng Sun, Run Yuan, Yingxuan Zhang, Yueyang Zhang](#)

- PMID: 40759088
- DOI: [10.1159/000547718](#)

Abstract

Objective Allergic rhinitis (AR) is a common chronic allergic inflammatory disease, and circulating inflammatory markers have been found to play an important role in the pathogenesis of allergic rhinitis. The aim of this study was to elucidate the causal relationship between 91 circulating inflammatory markers and AR using Mendelian randomisation (MR) analysis. **Method** The inverse variance weighted (IVW) approach to Mendelian randomisation analysis focuses on exploring causal relationships between exposures and outcomes using publicly available genetic variation from large genome-wide association studies (GWAS). That is, single nucleotide polymorphisms (SNPs) associated with 91 circulating inflammatory markers (14,824 participants of the European ancestry) were used as the exposure, and AR was used as the outcome variable with the aim of exploring the causal relationship between the 91 circulating inflammatory markers and AR. MR-Egger, weighted median (WM) and weighted models were employed as complementary methods to IVW in assessing the reliability of causal relationships. In addition, we utilised the MR robust adjusted profile score (MR-RAPS) method to fully assess Steiger's test was used to confirm whether the causal relationship between exposure and outcome was biased by reverse causality. Sensitivity analyses used Cochran's Q statistic and funnel plots to detect heterogeneity, and the MR-Egger intercept test and leave-one-out to assess horizontal multidimensionality. **Results** This study revealed a causal relationship between 91 circulating inflammatory markers and AR, especially DNER consistently presented as a risk factor for AR and TNF - beta levels consistently as a protective factor for AR. In addition, elevated levels of CCL19, CXCL11, CXCL5, DNER, IL - 18R1 , IL-17C, IL-6, IL-7, IL-4, and FGF19 may increase AR susceptibility. These results not only enhance our understanding of the pathological mechanisms of AR, but also provide potential biomarkers for risk assessment and intervention in clinical practice. **Conclusion** This MR analysis reinforces the importance of 91 circulating inflammatory markers in the diagnosis and prediction of AR. Future studies should further explore the mechanisms of action of these biomarkers and their potential as therapeutic targets for AR.

S. Karger AG, Basel.

Full text links

[Proceed to details](#)

Cite

chronic cough

1

Case Reports

Lung

-
-
-

. 2025 Aug 8;203(1):86.

doi: 10.1007/s00408-025-00838-y.

[Unnerving Cough in CANVAS: Cough Hypersensitivity Despite Airway Nerve Depletion](#)

[Barnaby Hiron](#)^{1,2}, [Katherine Rhatigan](#)^{1,2}, [William McNulty](#)², [Richard D Turner](#)^{3,4}, [James H Hull](#)⁵, [Caroline J Jolley](#)^{1,2}, [Robert D Hadden](#)⁶, [Ana Ribeiro](#)⁷, [Andrea Cortese](#)^{8,9}, [Peter S P Cho](#)^{1,2}, [Safa Al-Sarraj](#)¹⁰, [Jordi Serra](#)⁸, [Peter Bannister](#)¹⁰, [Chadwick B Smith](#)¹¹, [Matthew G Drake](#)¹¹, [Surinder S Birring](#)^{12,13,14}

Affiliations Expand

- PMID: 40779053
- DOI: [10.1007/s00408-025-00838-y](https://doi.org/10.1007/s00408-025-00838-y)

Abstract

Introduction: Cerebellar ataxia with neuropathy and vestibular areflexia syndrome (CANVAS) is a genetic neurodegenerative condition associated with chronic cough and cough hypersensitivity. The neuropathic mechanisms underlying cough in CANVAS are unknown. In a father and son with CANVAS-associated cough, we investigated clinical and neuropathophysiological features including bronchial and skin biopsies.

Methods: Patients completed assessments for cough severity (visual analogue scale, VAS), impact (Leicester Cough Questionnaire, LCQ), triggers (Cough Hypersensitivity Questionnaire), objective frequency with Leicester Cough Monitor, and reflex sensitivity with capsaicin cough challenge. Bronchoscopic airway biopsies were analysed for nerve morphology and compared to a healthy control. Neurological assessments included skin biopsies, nerve conduction studies, and microneurography.

Results: The father (age 62) and son (age 37) had advanced and early CANVAS, with a refractory chronic cough of 37 and 9 years duration, respectively. The cough in the father and son was of moderate severity (VAS 58 and 54 mm) and impact (LCQ score 15.9 and 13.1), with raised objective cough frequencies of 6 and 16 coughs hr⁻¹, and heightened cough reflex sensitivity to capsaicin with concentrations to evoke five coughs (C5) of 14.9 and 3.3 μmol L⁻¹, respectively. Bronchoscopic airway biopsies demonstrated severely depleted sensory small nerve fibres in the father and son compared to a healthy control: median (IQR) total nerve length 0 (0-0) and 0 (0-125) μm vs 944 (461-1323) μm, respectively. Skin biopsies showed absent intraepidermal nerve fibres, with densities of 0.0 [fibres.mm](#)⁻¹ in both patients. Functional microneurography revealed nociceptor fibre paucity and dysfunction.

Conclusion: In CANVAS, despite the loss of bronchial and cutaneous nerve fibres, there was heightened cough reflex sensitivity. Further studies are needed to elucidate underlying neural mechanisms.

Keywords: Airway innervation; CANVAS; Cough hypersensitivity; Lung biopsy.

© 2025. The Author(s).

Conflict of interest statement

Declarations. Conflict of Interest: BH, KR, WMN, RT, CJ, RH, AR, AC, PC, SAS, JS, PB, CS, MD, and SB declare no conflicts of interest in relation to this manuscript. JH declares receipt of advisory payments from Merck Pharmaceuticals.

- [41 references](#)

Supplementary info

Publication types, MeSH terms, SubstancesExpand

Full text links

[Proceed to details](#)

Cite

2

Laryngoscope

-
-
-

. 2025 Aug 7.

doi: 10.1002/lary.70019. Online ahead of print.

[Association Between Extrapulmonary Chronic Cough and Psychiatric Comorbidities](#)

[William A Strober¹](#), [Dorina Kallogjeri¹](#), [Matthew L Rohlfing¹](#), [Molly N Huston¹](#), [Jay F Piccirillo¹](#)

Affiliations Expand

- PMID: 40776585
- DOI: [10.1002/lary.70019](https://doi.org/10.1002/lary.70019)

Abstract

Objective: Chronic cough is a highly prevalent condition that significantly reduces quality of life, but our current understanding of the association between chronic cough and psychiatric comorbidities is limited. This study aims to describe the association between extrapulmonary chronic cough (ECC) and psychiatric comorbidities using a validated national database analysis.

Methods: The National Health and Nutrition Examination Survey (NHANES) was used to identify participants with ECC between 2007 and 2012. Participant demographic information and diagnoses were obtained from the results of these surveys. Multivariable logistic regression was used to assess associations between ECC and psychiatric comorbidities after controlling for several confounding factors including demographic variables and other comorbidities known to be associated with chronic cough.

Results: This study included a total of 9941 participants, corresponding to a weighted total of 123,419,943 participants. Of these, 5,753,420 (4.6%) had pulmonary-related chronic cough, 7,947,586 (6.4%) had ECC, and 109,718,937 (88.9%) had no chronic cough. There was a clinically and statistically significant association between ECC and depression severity (PHQ-9 categories) (mild OR: 1.7 [99% CI: 1.1-2.5], moderate OR: 1.9 [99% CI: 1.1-3.2], severe OR: 3.5 [99% CI: 0.83-14.32]). There was also a strong association between ECC and anxiety (OR: 1.9 [99% CI: 1.3-2.8]).

Conclusion: There are strong associations between ECC and both depression and anxiety. Physicians should consider the possible bidirectional impact of psychiatric comorbidities and chronic cough.

Level of evidence: Level 3.

Keywords: anxiety; chronic cough; cough; depression; epidemiology; national database.

© 2025 The American Laryngological, Rhinological and Otological Society, Inc.

- [28 references](#)

Supplementary info

Grants and fundingExpand

Full text links

[Proceed to details](#)

Cite

3

JAMIA Open

-
-
-

. 2025 Aug 4;8(4):ooaf083.

doi: 10.1093/jamiaopen/ooaf083. eCollection 2025 Aug.

[Chronic obstructive pulmonary disease screening using time-frequency features of self-recorded respiratory sounds](#)

[Alberto Tena](#)¹, [Ivan Juez-Garcia](#)², [Iván D Benítez](#)^{2,3,4}, [Francesc Clariá](#)¹, [Jessica González](#)^{2,3}, [Jordi de Batlle](#)^{2,3}, [Francesc Solsona](#)¹

Affiliations Expand

- PMID: 40766797
- PMCID: [PMC12322310](#)
- DOI: [10.1093/jamiaopen/ooaf083](#)

Abstract

Objectives: Chronic obstructive pulmonary disease (COPD) is the third leading cause of death worldwide, with up to 70% of cases remaining undiagnosed. This paper proposes a COPD screening tool based on time-frequency representation features of self-recorded respiratory sounds.

Materials and methods: Respiratory sound samples (breath and cough sounds) were extracted from COPD and asymptomatic non-COPD volunteers using a large, scientific-purpose database. We analyzed 39 time-frequency representation features of breath and cough sounds, combined with age, sex, and smoking status, using Autoencoder neural networks and random forest (RF) algorithms. We compared the performance of different breath and cough RF models built to detect COPD: one based exclusively on sound features, one based exclusively on sociodemographic characteristics, and one based on sound features and sociodemographic characteristics.

Results: Models including breathing features outperformed models exclusively based on sociodemographic characteristics. Specifically, the model combining sociodemographic characteristics and breathing features achieved an area under the curve (AUC), accuracy,

sensitivity, and specificity of 0.901, 0.836, 0.871, and 0.761, respectively, in the test set, representing a substantial increase in AUC when compared to the model based exclusively on sociodemographic characteristics (0.901 vs 0.818).

Discussion: Our results suggest that a lightweight collection of the time-frequency representation features of self-recorded beathing sounds could effectively improve the predictive performance of COPD screening or case-finding questionnaires.

Conclusion: COPD screening through self-recorded breathing sounds could be easily integrated as a low-cost first step in case-finding programs, potentially contributing to mitigate COPD underdiagnosis.

Keywords: COPD screening; artificial intelligence; chronic obstructive pulmonary disease; computer-aided diagnosis; machine learning.

© The Author(s) 2025. Published by Oxford University Press on behalf of the American Medical Informatics Association.

Conflict of interest statement

The authors declare that they have no known competing financial interests or personal relationships that could have influenced the work reported in this paper.

- [49 references](#)
- [4 figures](#)

Full text links

[Proceed to details](#)

Cite

4

ERJ Open Res

-
-
-

. 2025 Aug 4;11(4):01370-2024.

doi: 10.1183/23120541.01370-2024. eCollection 2025 Jul.

[Top 10 priorities for chronic cough: Canadian James Lind Alliance Priority-Setting Partnership \(CAN-COUGH\)](#)

[Saif Samari](#)^{1,2}, [Ana Oliveira](#)^{3,4,5,2}, [Danica Brister](#)⁶, [Elena Kum](#)¹, [Shawn D Aaron](#)⁷, [Darryl Adamko](#)⁸, [Anurag Bhalla](#)^{1,9}, [Christopher Carlsten](#)¹⁰, [Maxime Cormier](#)¹¹, [Anne K Ellis](#)¹², [Stephen K Field](#)⁶, [Krystelle Godbout](#)¹³, [Paul Hernandez](#)¹⁴, [Jeremy A Hirota](#)^{1,9}, [Alan](#)

[Kaplan](#)¹⁵, [Tom Kovesi](#)¹⁶, [Renata Mancopes](#)¹⁷, [Maria Sedeno](#)¹⁸, [Maeve Smith](#)^{19 20}, [Robert Newman](#)²¹, [Philip King](#)²¹, [Tiffany Gallagher](#)²¹, [Sarah Butson](#)²², [Dina Brooks](#)¹, [Imran Satia](#)^{1 9}

Affiliations Expand

- PMID: 40761655
- PMCID: [PMC12320103](#)
- DOI: [10.1183/23120541.01370-2024](#)

Abstract

Background: Chronic cough significantly impacts individuals' quality of life and poses challenges for healthcare providers due to limited licensed treatments, side effects of available medications and difficulty accessing nonpharmacological interventions. Understanding priorities for research, education and knowledge dissemination from the perspectives of individuals with chronic cough and healthcare providers can guide future efforts. This study aimed to identify these key priorities in Canada.

Study design and methods: We conducted a cross-sectional study using the James Lind Alliance (JLA) method to set priorities. Chronic cough was identified as the healthcare problem. Participants rated items related to research, education and knowledge dissemination in an online survey using a seven-point Likert scale. Results of the survey were reviewed by the Canadian Thoracic Society's (CTS) multidisciplinary working group and patient partners who engaged in a face-to-face Priority-Setting Partnership, to establish a "Top 10" priorities list for chronic cough.

Results: 74 individuals with chronic cough and 62 healthcare providers completed the scoping survey. The top-rated priorities included enhancing knowledge of existing treatments, developing new treatments and improving diagnostic testing. The final "Top 10" priorities list emphasised the need for developing infrastructure for evaluating new treatments, improving understanding of biological mechanisms and raising awareness among the public and policymakers.

Conclusion: This is the first priority-setting project for chronic cough, highlighting key areas to address in research, education and dissemination. The identified priorities will serve as a foundation for future efforts to improve the management and care of individuals with chronic cough.

Copyright ©The authors 2025.

Conflict of interest statement

Conflict of interest: A. Oliveira and I. Satia are associate editors of this journal. D. Adamko reports payment or honoraria for lectures, presentations, manuscript writing or educational events from Valero, AstraZeneca and GSK. S.K. Field reports grants from GSK and the Canadian Institutes of Health Research (CIHR); and consultancy fees from Merck and GSK. K.

Godbout reports payment or honoraria for lectures, presentations, manuscript writing or educational events from GSK; support for attending meetings from GSK; and participation on a data safety monitoring or advisory board with GSK. P. Hernandez reports grants from CIHR, LANSPEI, Boehringer Ingelheim, Grifols and Merck; consultancy fees from AstraZeneca, Boehringer Ingelheim, GSK, Merck, Janssen and Takeda; payment or honoraria for lectures, presentations, manuscript writing or educational events from AstraZeneca, GSK and Janssen; and a leadership role with the CTS. J.A. Hirota reports support for the present manuscript from Merck; and grants, consultancy fees, and payment or honoraria for lectures, presentations, manuscript writing or educational events from Merck. A. Kaplan reports consultancy fees from AstraZeneca, ALK, Eisai, GSK, Pfizer, Merck, Moderna, Sanofi, Trudel and Valeo; payment or honoraria for lectures, presentations, manuscript writing or educational events from AstraZeneca, ALK, Eisai, GSK, Pfizer, Merck, Moderna, Sanofi, Trudel and Valeo; and leadership roles with Family Physician Airways Group of Canada and Respiratory Effectiveness Group. T. Kovesi reports a leadership role with the CTS. M. Sedeno is an employee of RESPIPLUS, a nonprofit society (RESPIPLUS has received educational grants from Merck for developing patient and professional training programmes in chronic cough) and reports support for attending meetings from the Can-Cough initiative. The remaining authors have nothing to disclose.

- [34 references](#)
- [4 figures](#)

Full text links

[Proceed to](#)

"bronchiectasis"[MeSH Terms] OR bronchiectasis[Text Word]

1

J Allergy Clin Immunol

-
-
-

. 2025 Aug 6:S0091-6749(25)00804-8.

doi: 10.1016/j.jaci.2025.07.016. Online ahead of print.

[Investigating the impact of dipeptidyl peptidase-1 inhibition in humans using multi-omics](#)

[Merete B Long¹](#), [Amy Gilmour¹](#), [Rebecca C Hull²](#), [Yan Hui Giam¹](#), [Hollian Richardson¹](#), [Chloe Hughes¹](#), [Hani Abo-Leyah²](#), [Holly R Keir¹](#), [Daniela Alferes de Lima](#)

[Headley¹](#), [Rebecca Dowey³](#), [Helena Turton³](#), [Benjamin Jm New¹](#), [Thomas Pembridge¹](#), [Lilia Delgado¹](#), [Eve McIntosh¹](#), [Jamie Stobo¹](#), [Zhen Hui Peh¹](#), [Margaret Band⁴](#), [Fiona McLaren-Neil⁴](#), [Aran Singanayagam⁵](#), [Oriol Sibila⁶](#), [A A Roger Thompson³](#), [Marek Gierlinski⁷](#), [Alison J Dicker¹](#), [Alison M Condliffe³](#), [James D Chalmers⁸](#)

Affiliations Expand

- PMID: 40780678
- DOI: [10.1016/j.jaci.2025.07.016](https://doi.org/10.1016/j.jaci.2025.07.016)

Abstract

Background: Dipeptidyl peptidase-1 (DPP-1/Cathepsin C) processes and activates neutrophil serine proteases. Brensocatib (an oral, reversible, competitive DPP-1 inhibitor) is a novel therapy for bronchiectasis previously shown to reduce sputum protease activity and prevent exacerbations. Broader effects of DPP-1 inhibition on the immune response have not been investigated.

Objective: This study aimed to profile the effects of DPP-1 inhibition using a secondary analysis of the STOP-COVID19 trial.

Methods: The STOP-COVID19 trial was a randomized placebo-controlled trial of brensocatib 25mg in patients hospitalised for severe COVID-19 in the UK. In the primary analysis Brensocatib did not improve clinical outcomes at day 29. In a pre-specified sub-study at two UK hospitals was performed to explore the effects of DPP1 inhibition in the immune response.. blood samples were obtained at baseline and days 8, 15 and 29. Analyses included peripheral blood neutrophil mass spectrometry, neutrophil functional testing, serum cytokine analysis, whole blood mRNAseq and measurement of circulating neutrophil-associated markers.

Results: 161 patients were enrolled June 2020–January 2021 (brensocatib, n=80; placebo, n=81). Neutrophil proteomics showed significant alterations in 15 proteins (FDR $p < 0.01$) including reductions in cathepsin G and the pseudoenzyme azurocidin-1 (FDR $p < 0.0001$) by day 29. In serum, azurocidin-1 levels, but not total elastase or proteinase 3, were significantly reduced ($p < 0.0001$). Neutrophil surface expression of protease-cleavable C5aR1/CD88 was significantly increased by day 29 ($p < 0.05$). There were no differences in neutrophil extracellular traps, phagocytosis, circulating immune cell proportions or gene expression between treatment groups.

Conclusions: Brensocatib treatment in COVID-19 altered multiple neutrophil proteins including profound effects on azurocidin-1, identifying this as a key DPP-1 target and potentially highly sensitive biomarker of treatment efficacy.

Keywords: Azurocidin-1; Brensocatib; Cathepsin C; DPP-1; Dipeptidyl peptidase-1; Heparin Binding Protein; Inflammation; Multi-omics; Neutrophil; Proteomics.

Full text links

[Proceed to details](#)

Cite

2

Chronic Obstr Pulm Dis

-
-
-

. 2025 Aug 6.

doi: 10.15326/jcopdf.2025.0620. Online ahead of print.

[Navigating COPD and Bronchiectasis: A COPD Foundation 360Social Survey of Health Care Experiences and Perceptions](#)

[Radmila Choate](#)¹, [Timothy R Aksamit](#)², [John Torrence](#)³, [Phyliss A DiLorenzo](#)³, [Arturo Rodriguez](#)³, [Bruce Miller](#)³, [Jean Wright](#)³, [Dawn L DeMeo](#)⁴

Affiliations Expand

- PMID: 40774273
- DOI: [10.15326/jcopdf.2025.0620](https://doi.org/10.15326/jcopdf.2025.0620)

Free article

Abstract

Rationale: Chronic lung diseases, including COPD and bronchiectasis (BE), may differ by sex in symptom onset, diagnostic delays, and disease burden. This study examined healthcare experiences and symptom burden among individuals with self-reported COPD, BE, or non-tuberculous mycobacteria (NTM).

Methods: This cross-sectional study analyzed data from an online survey of U.S. and international participants with self-reported COPD, BE, or NTM, recruited via COPD Foundation (COPDF) social media. The questionnaire, developed with input from COPDF leadership, physician-researchers, and patient stakeholders, assessed healthcare experiences, disease burden, and symptoms. A subset of women answered menopause-related questions. Descriptive statistics were compared by sex and disease group: COPD (with/without BE or NTM) and BE (with/without NTM). T-tests assessed continuous variables; chi-square or Fisher's exact tests analyzed categorical variables.

Results: Among 632 respondents (mean age 70±9 years, 74% women), 68% reported COPD and 32% BE. Women with COPD were younger (p=0.048) and sought care sooner after symptom onset (p<0.010) than men. More women with COPD didn't have their diagnosis explained by a healthcare provider (p=0.038) and reported diagnosis-related anxiety, depression, or fear (p=0.007). Among participants with BE, men were more likely to receive a confirmed diagnosis sooner (p=0.038) and during hospitalization (p=0.024). Disease management burden, pulmonologist visit frequency, CAAT scores, numbers of comorbidities, and financial burden were similar across groups. Over 75% of women were postmenopausal, and one-third reported worsened pulmonary symptoms post-menopause.

Conclusions: Differences in diagnostic delays and symptom burden highlight the need for further research into healthcare disparities to improve pulmonary care and outcomes.

Keywords: COPD; bronchiectasis; self-perceived experiences; sex.

JCOPDF © 2025.

Full text links

[Proceed to details](#)

Cite

3

JAMA

-
-
-

. 2025 Aug 7.

doi: 10.1001/jama.2025.11485. Online ahead of print.

[What Is Bronchiectasis?](#)

[Kristin L Walter¹](#)

Affiliations Expand

- PMID: 40773212
- DOI: [10.1001/jama.2025.11485](https://doi.org/10.1001/jama.2025.11485)

No abstract available

Plain language summary

This JAMA Patient Page describes bronchiectasis symptoms, risk factors, diagnosis, and treatments.

Full text links

[Proceed to details](#)

Cite

4

Review

Eur Respir Rev

-
-
-

. 2025 Aug 6;34(177):250007.

doi: 10.1183/16000617.0007-2025. Print 2025 Jun.

[Haemophilus influenzae in bronchiectasis](#)

[Alessandro De Angelis](#)^{1,2}, [Martina Marchello](#)^{3,4}, [Angela Tramontano](#)^{5,6}, [Marianna Cicchetti](#)⁷, [Mattia Nigro](#)^{1,2}, [Edoardo Simonetta](#)², [Paola Scarano](#)², [Veronica Polelli](#)⁸, [Vincenzo Alberto Artuso](#)^{1,2}, [Stefano Aliberti](#)^{9,2}

Affiliations Expand

- PMID: 40769533
- DOI: [10.1183/16000617.0007-2025](https://doi.org/10.1183/16000617.0007-2025)

Free article

Abstract

Bronchiectasis is a chronic respiratory disease characterised by irreversible bronchial dilation, persistent productive cough and alternating periods of clinical stability and exacerbations. The distorted airways impair mucus clearance, making them susceptible to recurrent infections and chronic inflammation. *Haemophilus influenzae* is a common pathogen in bronchiectasis according to international registries. It employs several virulence mechanisms, including adhesion, intracellular invasion/survival, biofilm formation and evasion of antibiotic treatments, to establish infection. These

mechanisms allow *H. influenzae* to persist in the respiratory tract and evade host immune defences. Although its role is well-documented in other airway diseases, the impact of *H. influenzae* in bronchiectasis remains incompletely understood. International guidelines do not recommend eradication therapy for *H. influenzae* upon first isolation, while this intervention is advised for *Pseudomonas aeruginosa* in such cases. Long-term immunomodulatory treatment with macrolides is an option for patients with bronchiectasis with chronic *H. influenzae* infection and frequent exacerbations, though it carries the risk of promoting antibiotic resistance and a *Pseudomonas*-enriched airway microbiome. Studies indicate significant negative interactions between *P. aeruginosa* and *H. influenzae*, suggesting a competitive relationship that can influence microbiome dynamics and potentially affect clinical outcomes. Currently, there is insufficient evidence to support vaccination against nontypeable *H. influenzae* in chronic airways disease. Despite its frequent detection in respiratory samples, the precise role of *H. influenzae* in bronchiectasis-related morbidity and disease progression is not fully understood and warrants further investigation. This review examines the impact of *H. influenzae* on bronchiectasis pathophysiology and progression, comparing its role in other chronic respiratory diseases.

Copyright ©The authors 2025.

Conflict of interest statement

Conflict of interest: All authors declare that there is no relevant conflict of interest regarding the purpose of this review, as no suggestion or request from any organisation or company with potential vested interests influenced its conception.

Supplementary info

Publication types, MeSH terms, SubstancesExpand

Full text links

[Proceed to details](#)

Cite

5

ERJ Open Res

-
-
-

. 2025 Aug 4;11(4):00736-2024.

doi: 10.1183/23120541.00736-2024. eCollection 2025 Jul.

[Automated computed tomographic analysis of bronchial thickness and mucus plugs in bronchiectasis with asthma](#)

[Tjeerd van der Veer](#)^{1,2}, [Eleni-Rosalina Andrinopoulou](#)^{3,4}, [Punitkumar Makani](#)⁵, [Gert-Jan Braunstahl](#)^{1,6}, [Harm A W M Tiddens](#)^{5,7}

Affiliations Expand

- PMID: 40761656
- PMCID: [PMC12320113](#)
- DOI: [10.1183/23120541.00736-2024](#)

Abstract

Background: Bronchiectasis disease is characterised by cough, sputum and exacerbations, with chest computed tomography (CT) typically showing bronchial wall thickening and mucus plugging in addition to bronchial dilation. Asthma is a common comorbidity and associated with increased, eosinophilic, airway inflammation. Automated measurements of bronchial wall thickening and mucus plugs may serve as biomarkers for inflammation and are associated with clinical characteristics such as spirometry, blood eosinophil counts and disease severity in patients with bronchiectasis and asthma co-diagnosis.

Methods: In a cross-sectional retrospective cohort of 64 patients with bronchiectasis disease and asthma, we applied automated image analysis to assess bronchial dimensions and mucus plug metrics on chest CT scans. These metrics were correlated with spirometry, blood eosinophil counts as well as FACED and Bronchiectasis Severity Index (BSI) scores using correlations and multiple regression analyses.

Results: In 63 patients, bronchial wall thickness and mucus plugs were quantified. Negative correlations were observed between bronchial wall thickness markers and spirometry (bronchial wall thickness/accompanying artery diameter and forced expiratory volume in 1 s (FEV₁), $r = -0.37$; FEV₁/forced vital capacity, $r = -0.30$). Mucus plugs correlated negatively with spirometry and positively with FACED and BSI scores (number of mucus plugs and BSI, $r = 0.45$). Correlations with blood eosinophil counts were very weak. In multiple regression analyses, independent associations were observed for FEV₁, *Pseudomonas aeruginosa* and frequent exacerbations.

Conclusion: This study identified key relationships between automated measurements of bronchial wall thickness and mucus plugs and clinical characteristics, highlighting their potential as imaging biomarkers to enhance phenotyping, improve risk assessment and facilitate tailored treatment strategies in bronchiectasis.

Copyright ©The authors 2025.

Conflict of interest statement

Conflict of interest: T. van der Veer reports no conflicts of interest involving the work under consideration for publication, no relevant financial activities outside the submitted work and no other relationships or activities that readers could perceive to have influenced, or that give the appearance of potentially influencing, the current manuscript. E-R. Andrinopoulou reports no conflicts of interest and no relevant financial activities or other relevant relationships or activities regarding the work under consideration. P. Makani reports no conflicts of interest and no relevant financial activities or other relevant relationships or activities regarding the work under consideration. G-J. Braunstahl reports honoraria for lectures and consultancy from GSK, AstraZeneca, Novartis and Sanofi Genzyme, as well as research grants from Sanofi Genzyme, GSK and AstraZeneca, not related to the work under consideration. H.A.W.M. Tiddens received, in the last 3 years, multiple grants from the following public and institutional grant institutions for lung structure and function research: NHMRC, NIH, CFF, ECFS, IMI and Erasmus MC Sophia Foundation; received unconditional grants for investigator-initiated research from Novartis and Insmed; acted as a consultant for Insmed, Thirona, Neupharma and Boehringer Ingelheim; and has been chief medical officer for Thirona since April 2022, and vice-chair and faculty for the ADVANCE course sponsored by Vertex.

- [40 references](#)
- [4 figures](#)

Full text links

[Proceed to details](#)

Cite

6

Pneumonia (Nathan)

-
-
-

. 2025 Aug 5;17(1):19.

doi: 10.1186/s41479-025-00172-0.

[Microbial profiling of community-acquired pneumonia in patients with and without chronic obstructive pulmonary disease: a comprehensive molecular diagnostics study](#)

[Dagfinn Lunde Markussen](#)¹², [Christoffer Lindemann](#)³, [Sondre Serigstad](#)⁴⁵, [Synne Jenum](#)⁴⁶, [Christian Ritz](#)⁴⁷, [Harleen M S Grewal](#)⁴³

Affiliations Expand

- PMID: 40760674
- PMCID: [PMC12323216](#)
- DOI: [10.1186/s41479-025-00172-0](#)

Abstract

Background: Community-acquired pneumonia (CAP) causes substantial morbidity and mortality, particularly in patients with chronic obstructive pulmonary disease (COPD). This study compares the microbial detections in CAP patients with and without COPD using culture based and molecular diagnostic methods.

Methods: This prospective study included 412 hospitalized pneumonia patients (136 with COPD). Lower respiratory tract samples were analysed with traditional cultures and a multiplex PCR panel (FilmArray Pneumonia Panel Plus). Multivariable Poisson regression identified predictors of *Pseudomonas aeruginosa* detection, and logistic regression estimated detection probability using the top predictors.

Results: Overall pathogen detection rates were similar between groups, but *P. aeruginosa* was significantly more common in COPD patients (12.5% vs. 3.1%; $p < 0.001$). In adjusted analyses, each additional year of age increased the risk of *P. aeruginosa* by 5% (RR 1.05; 95% CI 1.01-1.09), while advanced COPD (GOLD 3-4) conferred a four-fold higher risk (RR 4.29; 95% CI 1.94-9.46), diabetes mellitus a four-fold risk (RR 4.04; 95% CI 1.97-8.29), and prior *P. aeruginosa* detection a five-fold risk (RR 5.03; 95% CI 2.44-10.36). Inhaler use, bronchiectasis, and recent hospitalization were not independently associated.

Conclusion: Although overall microbial detection rates were comparable between groups, *P. aeruginosa* was disproportionately prevalent in high-risk COPD individuals. While most COPD patients with pneumonia can be managed with standard empirical antibiotics, empirical coverage for *P. aeruginosa* should be considered for selected high-risk patients. Prospective studies are warranted to evaluate targeted *P. aeruginosa* coverage to optimize antibiotic stewardship and improve outcomes.

© 2025. The Author(s).

Conflict of interest statement

Declarations. Ethics approval and consent to participate: The study is approved by the Regional Committee for Medical and Health Research Ethics in South East Norway (REK ID: 31935) and performed in accordance with the Declaration of Helsinki. Written informed consent was obtained from all participants or their legal guardian/close relative at the time of recruitment. Consent for publication: Not applicable. Competing interests: The authors declare no competing interests.

- [23 references](#)

- [4 figures](#)

Full text links

[Proceed to details](#)

Cite

7

Ann Intern Med

-
-
-

. 2025 Aug 5.

doi: [10.7326/ANNALS-25-02786-JC](https://doi.org/10.7326/ANNALS-25-02786-JC). Online ahead of print.

[In patients with bronchiectasis, daily brensocatib reduced annualized pulmonary exacerbation rates](#)

[Holly Keyt¹; ACP Journal Club Editorial Team at McMaster University](#)

Affiliations Expand

- PMID: 40759016
- DOI: [10.7326/ANNALS-25-02786-JC](https://doi.org/10.7326/ANNALS-25-02786-JC)

Abstract

GIM/FP/GP: [Formula: see text] Pulmonology: [Formula: see text].

Conflict of interest statement

Disclosures: Disclosure form is available with the article online.

Full text links

[Proceed to details](#)

Cite

8

J Cardiopulm Rehabil Prev

-

-
-

. 2025 Aug 4.

doi: 10.1097/HCR.0000000000000983. Online ahead of print.

[Home-Based Rehabilitation With Health Coaching in Patients Living With Bronchiectasis](#)

[Caitlin Batzlaff¹²](#), [Johanna Hoult¹²](#), [Roberto Benzo¹²](#)

Affiliations Expand

- PMID: 40758084
- DOI: [10.1097/HCR.0000000000000983](https://doi.org/10.1097/HCR.0000000000000983)

No abstract available

Conflict of interest statement

All authors have read and approved submission of the manuscript and the manuscript has not been published and is not being considered for publication elsewhere in whole or part in any language except as an abstract. The manuscript was proofed and edited by a native-English speaker and/or an editing service (such as: <https://wkauthorservices.editage.com/>). All authors meet the 4 ICMJE criteria for authorship. All authors declare no conflicts of interest.

- [10 references](#)

Full text links

[Proceed to details](#)

Cite

9

Clin Pharmacokinet

-
-
-

. 2025 Aug 3.

doi: 10.1007/s40262-025-01550-z. Online ahead of print.

[A Phase IIa, Single-Blind, Placebo-Controlled, Parallel-Group Study to Assess Safety, Tolerability, and Pharmacokinetics/Pharmacodynamics of Brensocatib in Adults with Cystic Fibrosis](#)

[Michael W Konstan](#)¹, [James J Tolle](#)², [Emily DiMango](#)³, [Patrick A Flume](#)⁴, [Helen Usansky](#)⁵, [Ariel Teper](#)⁵, [Christina N Ramirez](#)⁵, [Jimmy Flarakos](#)⁵, [Jessica Basso](#)⁵, [Sherry Li](#)⁵, [Marcela Vergara](#)⁶

Affiliations Expand

- PMID: 40753522
- DOI: [10.1007/s40262-025-01550-z](#)

Abstract

Background and objectives: Brensocatib, an oral, competitive, and reversible inhibitor of dipeptidyl peptidase 1 (DPP1), reduces exacerbations and lung function decline in non-cystic fibrosis bronchiectasis (NCFBE). This study aimed to evaluate the pharmacokinetics (PK), pharmacodynamics (PD), safety, and tolerability of brensocatib in adults with cystic fibrosis (CF), comparing these findings with data from previous trials in healthy adults and in those with NCFBE to inform dose selection for future clinical trials.

Methods: A phase IIa, single-blind, randomized, placebo-controlled trial was conducted to assess the PK, PD, safety, and tolerability of brensocatib in adults with CF. Participants were randomly assigned to receive once-daily brensocatib (10 mg, 25 mg, or 40 mg) or placebo for 28 days. The study planned enrollment of up to 34 adults, stratified on the basis of their CF transmembrane conductance regulator (CFTR) modulator use, to evaluate the PK profile of brensocatib and its safety compared with placebo. Primary PK parameters, including maximum plasma concentration (C_{max}), time to maximum concentration (T_{max}), area under the concentration-time curve from 0 to 24 h (AUC_{0-24}), and half-life ($t_{1/2}$), were determined on day 1 and day 28. Dose-dependency of brensocatib exposure was analyzed, and safety and tolerability were assessed through treatment-emergent adverse events. Data from participants were compared with previous data from healthy adults and from those with NCFBE.

Results: A total of 29 participants were randomized to treatment, with 21 stratified to the CFTR modulator group. Baseline characteristics were similar among cohorts. Mean age was 37.9 (standard deviation (SD) 14.6) years, and most participants exhibited mild-to-moderate lung disease. PK analysis showed dose-dependent and predictable brensocatib exposure, with comparable profiles between participants with and without use of CFTR modulators. In addition, PK profiles in participants were comparable to those of healthy adults and of those with NCFBE. Pharmacodynamic analysis revealed dose-dependent reduction in neutrophil serine protease (NSP) activity, reaching saturation around the 25-mg dose, particularly in blood. Brensocatib at all doses was well tolerated with no new identified safety signals.

Conclusions: Brensocatib demonstrated consistent PK profiles independent of CFTR therapy and comparable to those of healthy and NCFBE adults. Brensocatib reduced blood and sputum NSP levels. The safety profile was comparable to previous studies, with no new safety concerns identified, supporting the use of similar dosing for adults with CF as for other populations. These findings advocate for further investigation of brensocatib in CF.

Clinical trial registration: [NCT05090904](#).

© 2025. This is a U.S. Government work and not under copyright protection in the US; foreign copyright protection may apply.

Conflict of interest statement

Declarations. Funding: This study was funded by Insmmed Incorporated (Bridgewater, NJ, USA). **Conflicts of Interest:** Michael Konstan reports consulting fees from Insmmed Incorporated. James Tolle and Emily DiMango have nothing to disclose. Patrick Flume reports consulting fees and research support from Insmmed Incorporated. Helen Usansky, Ariel Teper, Christina Ramirez, Jimmy Flarakos, Jessica Basso, Sherry Li, and Marcela Vergara are employees and shareholders in Insmmed Incorporated. **Ethics Approval:** This study was conducted in accordance with the protocol and consensus ethical principles derived from international guidelines, including the Declaration of Helsinki, Council for International Organizations of Medical Sciences International Ethical Guidelines, applicable International Council for Harmonisation Good Clinical Practices Guidelines, and other applicable laws and regulations. **Consent to Participate:** Participants and/or their legally authorized representative were informed that their participation was voluntary. Participants or their legally authorized representative were required to sign a statement of informed consent that met the requirements of ICH E6 (R2) guideline for good clinical practice (GCP) and any additional elements required by local regulations. **Consent for Publication:** Not applicable. **Availability of Data and Material:** The datasets generated and/or analyzed during the current study are not publicly available owing to patient privacy. **Authors' Contributions:** Helen Usansky, Ariel Teper, and Marcela Vergara contributed to the study conception and design. All authors contributed to data collection, analysis, and interpretation. All authors critically reviewed all manuscript drafts, approved the submitted version of the manuscript, and made the decision to submit the manuscript for publication.

- [31 references](#)

Supplementary info

Associated dataExpand

Full text links

[Proceed to details](#)

Cite

